Institut de la statistique du Québec

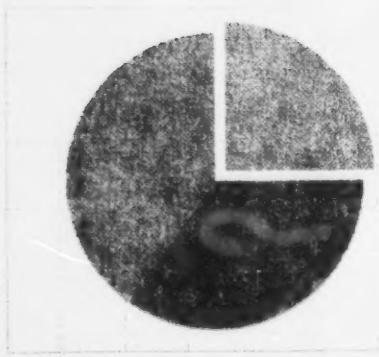
LONGITUDINAL STUDY OF CHILD DEVELOPMENT IN QUÉBEC (ÉLDEQ 1998-2002)

5-MONTH-OLD INFANTS

Family, Child Care and Neighbourhood Characteristics

Volume 1, Number 2

COLLECTION
Health and Well-Being



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Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002)

ERRATA

Family, Child Care and Neighbourhood Characteristics

Volume 1, Number 2

The reader is asked to please take note of the following corrections:

- **Review of the Methodology**(second to last paragraph): coefficients of variation (CV) 15 % or higher
- **page 26 :** Infants in a stepfamily... than those...
- End of box on **page 29 :** see Note 14 (rather than Note 8)
- **pages 30 & 31 :** the term "singleton" is not appropriate. In this text, this term means an only child.
- **page 33 :** Nearly one in seven (14%)... , and three in ten...
- **page 33, Table 4.1 :** 25-29 yrs (rather than 20-29 yrs)
- **page 36, Table 5.1 :** Note 3 should be omitted.
- **page 39, Table 6.1** (see on the back of this page).
- **page 40 :** Detailed information gathered on parental employment... (rather than the parents' work histories)
- **page 43 :** As shown in Table 6.5... , and slightly less than 30%...
- **page 49 :** These recent transformations... , particularly aimed at those in poverty... ("those aimed at children in poverty" should be omitted).
- **page 52, Table 8.1 (note 3) :** See definition of "overcrowded"(Note 36).
- **page 53, Table 8.2 (notes 4 et 5) :** (see above in the text).

A **corrected version** of this Number is available free-of-charge on the Website of the *Institut de la statistique du Québec*: http://www.stat.gouv.qc.ca.

ERRATA (suite)

Table 6.1
Distribution of Infants by Education of the Mother and Father, 1998

	Mother		Father[1]	
	n	%	n	%
No high school diploma	399	17.9	351	17.6
High school diploma	252	11.4	254	12.7
Some post-secondary studies[2]	394	17.8	337	16.9
Vocational/technical school diploma	238	10.7	231	11.5
College (Junior) diploma	390	17.6	333	16.6
University degree	546	24.6	494	24.7
Total	**2,219**	**100.0**	**2,000**	**100.0**

1. Biological father or spouse/partner living with the mother at the time of the survey.
2. Among those parents who had done some post-secondary studies, 47 mothers and 62 fathers had not graduated from high school.

Source: Institut de la statistique du Québec, *ÉLDEQ 1998-2002*.

Forward

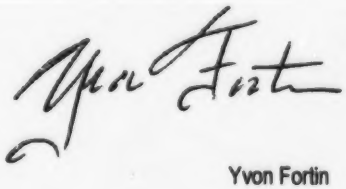
Similar to what has been observed in the majority of industrialized nations over the past twenty years, Québec and Canada have seen a significant increase in the costs related to maladjustment, particularly in young people. The Longitudinal Study of Child Development in Québec (*l'Étude longitudinale du développement des enfants du Québec*) (ÉLDEQ 1998-2002) being conducted by *Santé Québec* (Health Québec),[1] a division of *l'Institut de la statistique du Québec (ISQ)*[2] (Québec Institute of Statistics) in collaboration with a group of university researchers, will provide an indispensable tool for action and prevention on the part of government, professionals and practitioners in the field, who every day must face maladjustment in children.

More precisely, a major purpose of this longitudinal study of a cohort of newborns is to give Québec a means of preventing extremely costly human and social problems, such as school dropout, delinquency, suicide, drug addiction, domestic violence, etc. Similar to what is being done elsewhere (in the UK, New Zealand, the US), *Santé Québec* and a group of researchers have designed and developed a longitudinal study of children 0 to 5 years of age (2,223 children in this study and 600 twins in a related one). It will help gain a better understanding of the factors influencing child development and psychosocial adjustment.

The general goal of ÉLDEQ 1998-2002 is to learn the PRECURSORS, PATHS and EFFECTS, over the medium and long terms, of children's adjustment to school. ÉLDEQ is the logical extension of the National Longitudinal Study of Children and Youth (NLSCY, Canada). These Québec and Canada-wide longitudinal studies are both comparable and complementary. They employ distinct survey methods, and use different techniques to obtain the initial samples. Though many of the instruments are practically identical, about a third of those being used in ÉLDEQ are not the same.

This first report casts light on the enormous potential of the data generated by this study. From the descriptive analyses of the results of the first year of the study to the longitudinal analyses of subsequent years, there will be an enormous wealth of data. With updated knowledge on the development of the cohort of young children, the annual longitudinal follow-up will respond to the needs which the *ministère de la Santé et des Services Sociaux du Québec - MSSS* (Ministry of Health and Social Services), who financed the data collection, expressed in both the Report of the Working Group on Youth (*Rapport Bouchard, 1991, Un Québec fou de ses enfants* - the Bouchard Report, 1991, A Québec in Love with its Children) and the policy papers entitled *Politique de la santé et du bien-être, 1992* (Health and Well-Being) and *les Priorités nationales de santé publique 1997-2002* (Public Health Priorities 1997-2002).

Director General



Yvon Fortin

1. Certain French appellations in italics in the text do not have official English translations. The first time one of these appears, the unofficial English translation is shown immediately after it. Following this, for ease in reading, only the official French name appears in the text in italics, and it is suggested the reader refer to the Glossary for the English translation.

2. *Santé Québec* officially became a division of the *ISQ* on April 1, 1999.

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This analytical paper is also available in French. [Ce numéro et aussi disponible en version française sous le titre : « Milieux de vie : la famille, la garde et le quartier » dans *Étude longitudinale du développement des enfants du Québec (ÉLDEQ 1998-2002)*, Québec, Institut de la statistique du Québec, vol. 1, no 2].

Caution:

Unless indicated otherwise, "n" in the tables represents data weighted to the size of the initial sample.

Because the data were rounded off, totals do not necessarily correspond to the sum of the parts.

Unless explicitly stated otherwise, all the differences presented in this report are statistically significant to a confidence level of 95%.

To facilitate readability, proportions higher than 5% were rounded off to the nearest whole unit in the text, and to the nearest decimal in the tables and figures.

Weighting and the complex sample design were taken into account in calculating the results and their precision. The precision of the estimates of proportions was calculated using a mean design effect. This was also used for the chi-square tests, except in questionable cases for which the SUDAAN software program was used. In all other analyses, SUDAAN was used. Basic hypotheses, such as the normality of the data, were verified before applying the selected statistical tests.

Symbols

... Not applicable (N/A)
.. Data not available
– Nil or zero
p < Refers to the threshold of significance

Abbreviations

CV	Coefficient of variation
Not avail.	Not available
not signif.	Not significant

Acknowledgments

Santé Québec recognizes that the development and implementation of the Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002) flows directly from the synergy of effort and professionalism of many people throughout the whole process of mounting a survey of this size. Since 1995, individuals, various groups and organizations, a survey firm and the staff of Santé Québec have become indispensable links in making this ambitious project a reality - the first annual longitudinal survey of Québec infants.

A major characteristic of this project is that a pretest and survey are conducted every year. To accomplish this, we must annually: 1) make two sets of instruments (pretest and survey), 2) conduct two data collections, 3) analyze two sets of data, and 4) produce two types of communications materials. The results of each pretest means fine-tuning and developing instruments for the survey, which follows 17 months later. The results are sent to the parents (highlights), published in reports, and communicated to the scientific community and the public at large. The professionals and staff involved in collecting the data, as well as those involved before and after, must put their nose to the grindstone every year. We cannot over-emphasize our profound recognition of the incredible, concerted effort they are putting into this project over an 8-YEAR period, from the first pretest in 1996 to the final report to be published in 2004!

First, it must be said that without Daniel Tremblay, Director of *Santé Québec* (now part of the ISQ) since 1994, Christine Colin, Assistant Deputy Minister responsible for Public Health 1993-1998, Aline Émond, Director of *Santé Québec* 1986-1993, Richard E. Tremblay, Director of the ÉLDEQ research project, and Marc Renaud, President of *le Conseil québécois de la recherche sociale - CQRS* 1991-1997). ÉLDEQ 1998-2002, also known as "In 2002...I'll Be 5 Years Old!," would have never seen the light of day. In turn and together, they developed, defended and obtained the financing for this study. Thank you for your indefatigable tenacity.

A warm thanks to all the researchers and the support staff of their respective research groups, whose determination over the years has never wavered. Putting their research grants together every year has contributed to the development of the instruments, analysis of the data and publication of the copious results.

I would like to thank Lyne Des Groseilliers, ÉLDEQ's statistician since 1996, Robert Courtemanche, statistical advisor, and France Lapointe, ÉLDEQ's statistician 1995-1996. These three colleagues in the *Direction de la méthodologie et des enquêtes spéciales* (Methodology and Special Surveys Division) (*ISQ*) managed, with great skill, to set the signposts and navigate the somewhat winding course of this large-scale survey first.

A very special thanks to all the master designers of the National Longitudinal Study of Children and Youth (NLSCY, Canada). Without their expertise, advice and generosity, our survey would never have been accomplished. In many senses of the word "modeling," ÉLDEQ has learnt a lot from the NLSCY.

We would also like to extend out gratitude to the staff of the *Groupe de recherche sur l'inadaptation psychosociale chez l'enfant - GRIP* (Research Unit on Children's Pyschosocial Maladjustment) at the University of Montréal. Without their expertise, some of our survey instruments would have never been computerized to such a high level of quality.

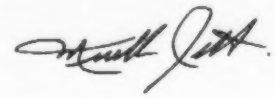
We would like to thank the personnel in the *Service de support aux opérations de la Régie de l'assurance-maladie du Québec - RAMQ* (Operations Support Section of the Québec Health Insurance Board). Without their efficiency, fewer letters of introduction would have found their way to the correct addresses of respondents.

Our sincerest thanks go to our survey firm, *Bureau d'interviewers professionnels (BIP)*. Since 1996, this polling company has been responsible for data collection in the pretests and surveys, and follow-up of families both inside and outside of Québec. Lucie Leclerc, President of *BIP*, has set the standard of quality for our numerous and complex data collections. Assisted by Véronique Dorison, she has instilled in her interviewers a great sense of respect for the respondent families, as well as a rigourous regard for all the norms governing this first-of-a-kind survey in Québec.

A big thank-you to the directors-general, directors of professional services, and staff of the medical records departments of some 80 hospitals in the province who accepted to collaborate in our study at a time when resources were rare and time was at a premium, and when the medical records departments in many hospitals were merging or in the process of doing so. Their support was exceptional. Birthing centres also graciously accepted to participate in this first Québec longitudinal study of children. A special thanks to Julie Martineau, medical records specialist, who contributed to the analysis of indispensable medical information by ensuring very rigourous coding of the data, which often lay concealed in the medical files of the infants and their mothers.

It goes without saying that the staff of *Santé Québec* Division directly attached to ÉLDEQ 1998-2002 are the cornerstone of its success from practically every point of view. Special thanks for their ongoing contribution and constant hard work go to Hélène Desrosiers and Josette Thibault, responsible respectively for analysis of the data and creation of the measurement instruments; Martin Boivin, Rolland Gaudet and Gérald Benoît, who constantly pushed the limits of what computer software can do in terms of programming and data processing; Suzanne Bernier-Messier and Diane Lord, who give meaning to the word versatility, who must organize, code and manage incredible quantities of data to ensure the progress of the study. Not directly attached to the team but who made extremely important contributions are: France Lacoursière, France Lozeau and Thérèse Cloutier, who put the finishing touches to the Santé Québec "look" in the survey instruments, reports and conference publications; Lise Ménard-Godin, who conducted fruitful literature searches and advised on many aspects of the collection instruments. The hard work, constant availability, ability to adapt, and finely-honed skills of the people working on this project match the enthusiasm that all our partners have demonstrated in making this study a resounding success.

Finally, I would like to extend a very special thank-you to the 2,223 families who responded to our survey. Thank you for the trust you have shown in Santé Québec, our partners and collaborators. Thanks to your participation, your children have become the veritable stars of ÉLDEQ 1998-2002, and are making it possible, in the short term, to gain a better understanding of psychosocial adjustment in children. In the medium and long terms, they will likely be in large part responsible for the establishment of early detection programs, better designed prevention programs, and more effective interventions for such an important clientele - all of Québec's children.



Mireille Jetté
Project Coordinator
Santé Québec Division, ISQ

Preventing Social Maladjustment

It suffices to consider the costs engendered by behavioural problems in children - school dropout, delinquency, alcoholism, drug addiction, family violence, mental disorders and suicide - to conclude that they largely surpass what a modern society can accept, morally and economically. Faced with the enormity of these problems, the first reflex is to provide services to these people which will, ideally, make the problems disappear, or at the very least, lessen their severity. For many years we have tried to offer quality services to children and adults who suffer from antisocial disorders, alcoholism, drug addiction, depression, and physical or sexual abuse. However, in spite of enormous investment, these curative services are far from being able to respond to the demand.

Although the idea of early intervention as a preventive measure can be traced at least as far back as ancient Greece, the second half of the 20th century will certainly be recognized as the dawn of the field of social maladjustment prevention (Coie *et al.*, 1993; Mrazek & Haggerty, 1994). Numerous programs have been developed for adolescents and teenagers to prevent school dropout, delinquency, drug addiction and suicide. Scientific evaluations of these programs have been far too few in number, but they tend to demonstrate that it is extremely difficult to help those most at risk in this age group (Rosenbaum & Hanson, 1998; Rutter, Giller & Hagell, 1998; Tremblay & Craig, 1995). It is becoming increasingly clear that the factors which lead to serious adaptation problems are in place long before adolescence. Hence the idea that the prevention of social adaptation problems should start at least during childhood, and preferably right from pregnancy (Olds *et al.*, 1998; Tremblay, LeMarquand & Vitaro, 1999). These principles are clearly outlined in the objectives of the *Politique de la santé et du bien-être* (Policy on Health and Well-Being) and *les Priorités nationales de santé publique* (Priorities for Public Health) set by the government of Québec (ministère de la Santé et des Services sociaux, 1992; 1997).

The Need to Understand Early Childhood Development

If the field of maladjustment prevention appeared at the end of the 20th century, it has certainly come on the heels of child development. *"Émile,"* by Jean-Jacques Rousseau, needs to be re-read in light of recent studies to realize just to what degree it is impossible to understand the complexity of child development, and therefore the means of preventing deviant paths, simply by reflection or introspection. Although considerable knowledge has been acquired in the neurological, motor, cognitive, affective and social development of children, what really hits home is that Jean-Jacques Rousseau and his followers in education seemed to have had more certainty about the ways of educating children than we do today.

Progress in child development research has made us realize that things are not as simple as we can or would like to imagine. We have obviously all been children, and most of us have become parents, indeed, relatively well-adjusted ones. But we still do not clearly understand when, how and why adjustment problems appear, and above all, how to prevent and correct them.

Our ignorance is obvious when we examine the debates among specialists on the role of parents in the development of maladjustment problems in children. Some suggest that social maladjustment in children is largely determined by genetic factors (Bock & Goode, 1996; Rowe, 1994). Some accentuate economic factors (Duncan & Brooks-Gunn, 1997). Other researchers attribute a determining role to peer influence (Harris, 1998; Harris, 1995; Vitaro *et al.*, 1997). These larger questions lead to narrower ones which focus on particular aspects - the role of fathers in childhood maladjustment, the impact of alcohol and cigarette consumption during pregnancy, the effect of prenatal and birthing problems, the importance of breast feeding and diet; the role of sleep, cognitive development, temperament, and so on.

The majority of these questions are at the heart of the daily concerns of parents, grandparents, educators, family service providers, and legislators. What can we do to maximize the development of our children, to prevent severe psychosocial

maladjustment? What should we do when problems begin to appear, when pregnant mothers, or fathers themselves have a long history of disorders? The answers to these questions obviously have an effect on the policies put forth by Québec government Ministries such as *ministères de la Famille et de l'Enfance* (Family and Child Welfare), *de l'Éducation* (Education), *de la Santé et des Services sociaux*, *de la Solidarité sociale* (Social Solidarity - formerly Income Security (Welfare)), *de la Sécurité publique* (Public Security), *de la Justice* (Justice), and *le ministère de la Recherche, Science et Technologie* (Research, Science and Technology).

The Contribution of ÉLDEQ 1998-2002

The Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002) was conceived in order to contribute to our knowledge of the development of children in their first 5 years of life. The main goal is to gain a better understanding of the factors, in the years of rapid growth, which lead to success or failure upon entry into the school system. The goal of the second phase (if approved) is to better understand development in elementary school, in light of development in early childhood.

We know that this survey cannot be a definitive one on child development in Québec, but it is the first representative study of a provincial cohort of children who will be measured annually from birth to entry into the school system. It specifically aims at understanding the development of basic skills needed for educational success.

Although the effort to set up this study began in 1989, the first data collection coincided with the Québec government's implementation of its *Politique Familiale* (Policy on Families). The policy has virtually the same objectives as our study:

> "These services for children 5 years and under should give all Québec children, whatever the socioeconomic status of their parents, the chance to acquire and develop the skills that will allow them to succeed in school (1997, p. 10)."

On March 3 1999, in the speech opening the 36th session of the Québec legislature, Premier Lucien Bouchard confirmed that early childhood development was a priority for the government:

> "The theme that will dominate our actions this year, next year, and throughout our mandate, is youth... The priority...with regards to youth in Québec, begins with the family and childhood... This massive investment in early childhood... will give our children the best chance of success in the short, medium and long terms. It is our best asset against alienation and despair. It is our best preparation for personal, social and economic success."

Because of this historic coincidence, ÉLDEQ has the potential of becoming an invaluable tool for monitoring the effects of Québec's massive investment in early childhood which began in 1997. Thanks to the data collected by the federal government's National Longitudinal Study of Children and Youth (NLSCY, Canada), we will be able to compare child development in Québec with that elsewhere in Canada, before and after the implementation of Québec's new policy on the family.

However, our initial objectives are more modest. The 12 or 13 papers in this series present the results of our first annual data collection. They describe the characteristics of the families and children when the latter were 5 months old.[3] They cover sociodemographic characteristics, nature of the birthing process, health and social adaptation of the parents, family and couple relations, parent-infant relations, and characteristics of the 5-month-old, such as sleep, diet, oral hygiene, temperament, and motor, cognitive and social development. These data will eventually be compared to those on children the same age collected by the NLSCY in 1994 and 1996.

An Interdisciplinary, Multi-University Team of Researchers

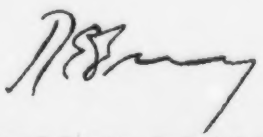
This study saw the light of day because of the collaboration of many people. In the preceding pages, Mireille Jetté thanked a number of them. I would like to take advantage of this introduction to emphasize that the survey was set up and continues forward because of the dedication and hard work of a

3. To simplify the text in this report, the phrase "5-month-old infants" will be used to refer to infants whose mean age was 5 months during data collection in 1998. In section 3.1.3 (Volume 1, Number 1), we explain why the infants were not all exactly the same age. As indicated in no. 2 of this series, 52% of the infants were less than 5 months, and 3.4% were 6 months of age or over.

group of researchers from a variety of disciplines and universities. I would particularly like to thank Michel Boivin, School of Psychology at Laval University, and Mark Zoccolillo, Department of Psychiatry at McGill University, who have been actively involved in this project since 1992. It was in that year that we prepared out first grant application for the Social Sciences and Humanities Research Council of Canada. A second group of researchers joined the team in 1993 and 1994: Ronald G. Barr, pediatrician, Montréal Children's Hospital Research Institute, McGill University; Lise Dubois, dietitian and sociologist, Laval University; Nicole Marcil-Gratton, demographer, University of Montréal and Daniel Pérusse, anthropologist, University of Montréal. Jacques Montplaisir, Department of Psychiatry, University of Montréal, joined the team in 1995. Louise Séguin, Department of Social and Preventive Medicine, University of Montréal and Ginette Veilleux, Public Health Department of Montréal-Centre, joined in 1998. Three post-doctoral researchers have also made an important contribution. Raymond Baillargeon developed the task for measuring cognitive development. Christa Japel is the assistant to the scientific director for planning, analysis and presentation of the results. Heather Juby collaborates in the analysis of the data on couple and family history.

A Unique Confluence of Circumstances

A study such as this requires the coordination of many researchers over many years, enormous financial resources, and a long period of preparation. Though in the early 1990s the research team was convinced of the need for the survey, those responsible for the public purse had also to be convinced. We must therefore acknowledge the happy confluence of circumstances that allowed the players to take advantage of the opportunity at hand. When a number of civil servants in the *ministère de la Santé et des Services sociaux* understood the essential role of prevention, the creation of a committee on children and youth in 1991 led to an increased awareness of the importance of early childhood. At the same time, the president of the *CQRS*, Marc Renaud, had come to the same realization with his colleagues in the Population Health Program at the Canadian Institute for Advanced Research (CIAR). Aline Émond, the Director of *Santé Québec*, was ready to apply her formidable determination to work for the cause. For their part, Health Minister Jean Rochon and his Assistant Deputy Minister for Public Health, Christine Colin, aware of the importance and benefit of longitudinal studies on early childhood development, authorized the investment of large sums of money during a period of draconian budget cuts. This occurred at the same time as the federal government decided to create its own longitudinal study of children and youth (NLSCY). It is in this context that ÉLDEQ 1998-2002 materialized. Our survey also came to fruition because Mireille Jetté did everything in her power to make the researchers' dreams a reality, and Daniel Tremblay gave her all the support she needed by making various resources available for the project.



Richard E. Tremblay, Ph.D., M.S.R.C.
Chair of Child Development
University of Montréal

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Review of the Methodology

This analytical paper is one of a series presenting cross-sectional data collected on a large sample of 5-month-old infants surveyed in 1998. It reports on the first of 5 annual data collections on 2,120 children in Québec who will be studied until they are 5 years old. In the first year of data collection, the results on 2,223 infants were retained.[4]

The target population of the survey is Québec babies, singleton births only,[5] who were 59 or 60 weeks of gestational age[6] at the beginning of each data collection period, born to mothers residing in Québec, excluding those living in the Northern Québec, Cree, and Inuit regions, and on Indian reserves, and those for whom the duration of pregnancy was unknown. Due to variations in the duration of pregnancy and the 4 or 5 weeks allotted for each data collection wave, the infants were not all exactly the same age (gestational or chronological) at the time of the survey. Therefore, the children in Year 1 (1998) of the survey had a mean gestational age of 61 weeks - about 5 chronological months.

The survey had a stratified, three-stage sampling design, with a mean design effect for the proportions estimated at 1.3. To infer the sample data to the target population, each respondent was given a weight corresponding to the number of people he/she "represented" in the population. ÉLDEQ 1998 comprised eight main collection instruments which obtained data from the person who was closest to the baby (called the Person Most Knowledgeable - PMK), the spouse (married or common-law), the infant and the absent biological parent, if applicable. Given variation in the response rates to each instrument, three series of weights had to be calculated to ensure inferences to the population were accurate. Except for the Self-Administered Questionnaire for the Absent Father (SAQFABS) and a series of questions in the Computerized Questionnaire Completed by the Interviewer (CQCI) on absent fathers - the overall or partial response rates of which were too high - the results of all the instruments could be weighted. Therefore, the data presented here have all weighted to reduce the biases.

All data that had coefficients of variation (CV) higher than 15% are shown with one or two asterisks to clearly indicate the variability of the estimate concerned. In addition, if the partial non-response rate was higher then 5%, there is a note specifying for which sub-group of the population the estimate is less accurate.

Similar to any cross-sectional population study, the Year 1 part (5-month-old infants) of ÉLDEQ 1998-2002 has certain limits. However, the vast majority of the results are valid and accurate, and provide a particularly detailed portrait, for the first time, of 5-month-old infants in Québec.

Note to the reader: For more details on the methods, see Volume 1, Number 1 in the present series. Detailed information on the sources and justification of the instruments used in Year 1 of ÉLDEQ 1998-2002, and the design of the scales and indices used in this paper, are covered in Number 12, entitled "Concepts, Definitions and Operational Aspects."

4. Though the results for 2,223 children were retained for the first year of data collection, 2,120 will be retained for the rest of the longitudinal study; the extra 103 were part of an over-sample used to measure the effects of the January 1998 ice storm.

5. Twins (twins births) and other multiple births were not targeted by the survey.

6. Gestational age is defined as the sum of the duration of gestation (pregnancy) and the age of the baby.

Family, Child Care and Neighbourhood Characteristics

1. Québec Children in a Rapidly Changing World

The social context in which children are born and grow up has considerably changed in Quebec in the past 30 years. The decline in the birth rate and increase in mean age of mothers having their firstborn has been accompanied by the decline in traditional marriage and popularity of common-law unions. Overall, there is less stability in these relationships, with a concomitant increase in single-parent and stepfamilies. Both parents working outside the home is also a widespread phenomenon. Parallel to these changes in the nuclear family are an aging population, the emergence of new forms of work, ethnocultural diversification, new policies and legislation affecting families (*e.g.* parental leave, subsidized daycare), and rapid development of new information and communication technologies. These are fashioning a variety of life environments in which children are growing up today, marked by ever-increasing complexity and values in constant evolution.

Since the end of the 1960s, the formation of a family unit has undergone radical change. The widespread use of contraception has resulted in births being planned more than ever before. In Québec, the total fertility rate, the mean number of infants that a woman will have in her lifetime if current trends continue, has gone from 3.56 children in 1963 to 1.53 in 1997, after achieving an historic low of 1.35 in 1987 (Thibault, 1999). This decline, steeper than in most Western societies, has led to a radical decrease in the size of families. The norm now is that a child will share his family environment with a single brother or sister. Also induced by the massive influx of women into the labour market, the shrinkage in the size of families has changed not only the expectations and demands of parenting but also the type of relationships children face growing up in a society composed of mostly adults (Gauthier & Bujold, 1993).

Increasingly, Québec families are being formed outside marriage. More than half the births in 1996 were to unmarried parents, compared to only 18% in the early 1980s. Since the proportion of births from unknown or undeclared fathers has remained stable at around 5% during this period, the increase in the birth rate outside marriage is in large part attributable to the steep rise in common-law unions in Québec (Duchesne, 1997) and the choice of them as a context in which to raise a family. However, compared to married couples, this type of relationship has its own characteristics (such as greater instability) (Desrosiers & Le Bourdais, 1996; Shelton & John, 1993), the effects of which we are just beginning to see in children.

In the context of increased mobility in couples, living part of early childhood in a single-parent or stepfamily as a result of a break-up has become a reality for an increasing proportion of children (Marcil-Gratton, 1998). Following the break-up of their parents' relationship, many children, from a very young age, see new characters enter the family stage, such as a parent's new spouse/partner, new "grandparents," half-brothers and half-sisters, or other siblings with whom they have no biological or adoptive link. Associated with these more complex family paths are new economic or social trajectories such as frequent moves and changes in standard of living (Picot, Zyblock & Pyper, 1999).

Parallel to these important changes in the family life of children, the increase in working women in Québec since the early 1970s has been particularly striking in mothers of pre-school children, rising from 30.2% in 1976 to 64.2% in 1997 (*Conseil de la famille et de l'enfance* et autres,1999). An economic necessity for an increasing number of young families, the fact that the mothers work, by choice or obligation, has had numerous effects on their lives as individuals and on the fabric of family relationships. Furthermore, as a result of the massive influx of mothers into the workforce, many children have had to establish relationships with adults outside the immediate family, from a very early age. For children in daycare, a new kind of sociability has become a substitute for interaction with siblings. Relationships with peers acquire a new importance from very early childhood on.

Significant changes in the birth rate, married life and workforce have radically transformed parenting behaviours and the means by which society takes care of children, as witnessed by new government programs for families in recent years. Concurrent with these rapid changes, other phenomena such as poverty in young families and teenage pregnancy remain concerns because of the high personal and social costs associated with them (*ministère de la Santé et Services sociaux*, 1997). This

situation clearly presents new challenges and imposes new demands on children in terms of social and school adjustment.

Conducting a longitudinal study that monitors children throughout early childhood is one of the most germane means of evaluating the influence of family, school and social factors on child development. The data collected in the first year (1998) of ÉLDEQ 1998-2000 provide a portrait of the various environments in which children are living in the first few months of their lives.

Indeed, the objective of this paper is to sketch the major characteristics of the large sample of infants and their families who were visited for the first time in 1998, when the cohort was an average of 5 months old. The presentation of these results has two main objectives: 1) familiarize the reader with the characteristics of the study population, and 2) facilitate comprehension of the analyses presented in subsequent papers in this series, since demographic and socioeconomic characteristics are among the major determinants of the health and well-being of children and their families.

The children are presented from the perspective of their principal environments - family, daycare and neigbourhood. First, a portrait of the type of family in which the children are living is sketched, including siblings. Characteristics of the parents, central figures in the life of any young child, are described, namely age, ethnocultural origins, education, employment status, and income. The nature of the family dwelling, child care arrangements and perception of neigbourhood safety complete the descriptive picture of the infant's environment. Finally, to illustrate the wealth of data provided by this survey, some promising directions for further research are suggested.

2. Study Population and Instruments

This cross-sectional portrait comes from a sample of 2,223 children (in an equal number of households) whose parents accepted to participate in ÉLDEQ 1998-2002. Thanks to these 2,223 open doors to the world of infants, we can outline the environment in which these children are learning their first life skills.

As presented in the first paper in this series, the target population of this study was Québec children of singleton birth who were between 59 and 60 weeks of gestational age at the beginning of each wave of data collection, gestational age defined as the sum of the duration of pregnancy and age of the child. After weighting, the sample comprised 1,088 girls (49%) and 1,135 boys (51%), representative of Québec infants with a mean age of 5 months at the time of the survey in 1998. Since the duration of pregnancy varies, some babies were less than 5 months old (52%) and others 6 months or over (3.4%).[7]

Most of the data in this paper were derived from the Computerized Questionnaire Completed by the Interviewer (CQCI). To gather information on the children and family, questions were asked of the person who best knows the child, called the Person Most Knowledgeable (PMK), which in 99.7% of the cases was the biological mother. Sociodemographic information on the child, PMK and his/her spouse/partner was collated. The CQCI provided information on 2,221 mothers,[8] 2,020 fathers/spouses living in the household,[9] and 2,223 infants. Information on perception of the household's financial situation comes from the Paper Questionnaire Completed by the Interviewer (PQCI).

Focusing on the child as the primary unit of analysis, the aim of this survey was to go beyond traditional surveys centred on people living in the household by also collecting information on absent biological fathers. This, combined with information collected on the custodial parent and new spouse/partner living in the household, should provide a new perspective on understanding the influence of various types of family environments on early childhood development. Because of the high partial non-response rate in the absent parent section of the CQCI, sociodemographic data on absent biological fathers were not weighted (see box on page 29). Given the rarity of large-scale studies covering absent parents, the results however merit our attention and are presented purely as descriptive data to cast light on these non-custodial fathers in the first year of ÉLDEQ 1998-2002. All other data in this report were weighted, and can therefore be considered representative of the target population of infants.

7. Based on gestational age rather than chronological age, the sample was designed to ensure that the infants had on average achieved the same level of maturation. Variations in the duration of gestation and the timing of the interview in a four-week collection wave explain why the infants were not all the same chronological age, 97% being 4 or 5 months at data collection time in 1998.

8. Namely 2,219 biological mothers and 2 foster mothers. Two CQCIs were not completed - one in a household where the biological mother was absent and other in which the respondent was the grandmother of the child.

9. Namely, of a total of 2,021 fathers or spouse/partners present in the household, 2,014 were biological fathers, four were not biological fathers, and two were foster fathers. One questionnaire for a biological father could not be filled out because of technical problems.

3. Portrait of the Infants' Families

In the past 20 years, numerous studies have investigated the impact of changes in family life on the social adjustment and well-being of individuals (for a review see Bernier et autres, 1994). Cross-sectional and longitudinal studies indicate that living in a single-parent or stepfamily increases the risk of adjustment and health problems, at the very least on a temporary basis, in parents and children (Bellerose *et autres*, 1989; Bernier *et autres*, 1994; Cheal, 1996). Compared to those in an "intact" two-parent family, children in a stepfamily with a stepfather, like those living with a single mother, are more likely to present certain affective or behavioural problems such as conduct and antisocial disorders (*e.g.* bullying). This is more likely even taking into account various socioeconomic characteristics of the family such as income (Lipman *et autres*, 1996) or employment status of the mother (Dawson, 1991). The mechanisms at play, however, remain complex. Maladjustment in children from a broken family, for example, may also be due to the tension that goes with the separation of the parents or to pre-existing problems. On the whole, it is recognized that it can be hazardous to simply equate a certain family structure with maladjustment and health problems, since beyond these are numerous factors such as family atmosphere or parenting skills that can influence the well-being of children.

Though a snapshot of family structure cannot alone give an indication of the future development of a child, knowing the family context in which an infant is developing in the first few months of life is certainly important. For example, households with absent fathers are more likely to be exposed to poverty, and mothers who do not live with the biological father cannot benefit from the daily support of the other parent in taking care of the newborn, which can affect the parent/child relationship. Furthermore, for infants beginning life in a stepfamily, their situation is unique in the fact that, by definition, they are surrounded by step-brothers and/or step-sisters with whom they share only one parent. These situations can have an influence on parenting and child-rearing practices and on the relationships stepchildren establish among themselves.

The type of union parents choose also has an impact on the family life-path and development of the children. Certain studies have shown that in Canada common-law couples who become parents are more likely to break up than their married counterparts (Desrosiers & Le Bourdais, 1996; Marcil-Gratton, 1998). However, common-law couples tend to share family responsibilities in a more egalitarian manner than married couples (Shelton & John, 1993). Indeed, family dynamics may vary by the type of union formed by the parents.

3.1 The Diversity of Family Configurations

Distribution of infants by family type in ÉLDEQ 1998 is shown in Table 3.1. For the purposes of analysis three types of families were distinguished. Intact two-parent families comprise only those in which children live with both of their biological or adoptive parents. Stepfamilies are those in which the couple have at least one child who was not born of the current relationship. Single-parent families designate those in which the child lives with only one parent. In all these types of families, the infants are differentiated by whether their parents are married or living common-law.

As indicated in Table 3.1, at the time of the survey, 80% of the infants were living with both biological parents in an intact two-parent family, and slightly more than 10% were in a stepfamily, namely living, according to various custody arrangements, with half-brothers and/or half-sisters from a previous relationship of one of the parents.[10] Nearly one in ten (9%) infants were living with a single parent, which in virtually all cases, was the

10. The chart of family relationships in the household and the section on family history (including custody) in the CQCI were used to differentiate intact two-parent families from stepfamilies. The combination of information contained in these two sections provides a description of the family environment in which the infant was living. The section on family history furnished data on whether the parents of the infant had children from a previous relationship and the custody arrangements for these children (partial or full). According to what the PMK indicated, an infant living at least part of the time with half-brothers and/or half-sisters was designated as being in a stepfamily. However, an infant was considered to be in an intact two-parent family in cases where one or both parents had children from a previous relationship, but none of them ever came to stay in the household. According to the 1998 ÉLDEQ data, this situation was relatively rare and mainly involved children of a previous relationship of the infant's father (see no. 11 in this series of analytical papers).

biological mother. In total, for all types of families, nearly half of the infants (46%) were in a family where the parents were living in a common-law relationship.

Table 3.1

Distribution of Infants by Family Type at the Time of the Survey,[1] 1998

	n	%
Intact, two-parent family	**1,771**	**80.0**
Parents married	927	41.9
Parents living common-law	844	38.1
Stepfamily	**240**	**10.8**
Parents married	56	2.5*
Parents living common-law	183	8.3
Single-parent family[2]	**203**	**9.2**
Total	**2,214**	**100.0**

1. The household may have included relatives of the infant such as grandparents, aunts etc., or unrelated people such as roomers or boarders. Excluded were children living in a foster family or children for whom the type of family or living arrangements was unknown.
2. In virtually all cases, the single parent was the biological mother.

* Coefficient of variation (CV) between 15% and 25%; interpret with caution.

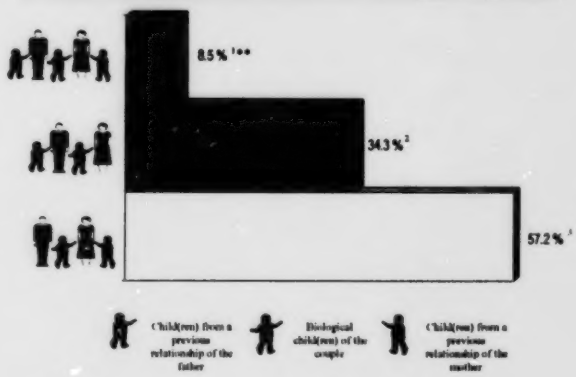
Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

Infants in a stepfamily were more likely to have been born of a common-law couple those in an intact two-parent family (Table 3.1). The proportion of common-law relationships was higher in young mothers and francophones (French-speakers) (data not shown).[11]

Figure 3.1 illustrates the origins of the children in stepfamilies. As indicated, the structure of these families reflects who had custody of the children, which in the majority of cases, was the mother. In nearly 6 out of 10 stepfamilies, the children not born of the current couple came from a previous relationship of the mother;[12] approximately one third of stepfamilies had children born of a previous relationship of the father. Less than one in ten families (9%) was a complex type, namely had children from previous relationships of both mother and father in addition to children born of the current relationship. This type of family configuration comprised just 1% of all families studied.

Figure 3.1

Distribution of Infants in Stepfamilies, 1998


0.5% [1]**
3.3% [2]
6.2% [3]
Child(ren) from a previous relationship of the father
Biological child(ren) of the couple
Child(ren) from a previous relationship of the mother

1. Namely 0.9% of all families.
2. Namely 3.7% of all families.
3. Namely 6.2% of all families.

** Coefficient of variation (CV) higher than 25%; imprecise estimate for descriptive purposes only.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

The data show that "traditional" families, composed of a married couple and their biological children, were not the majority in which this cohort of infants was living, comprising only 42% (Table 3.1).

One of the benefits of ÉLDEQ is that it presents a picture of the infant's family environment outside the household in which he lives. In the context of couple instability, it is not unusual for children residing with their biological parents in a "traditional" family to have half-brothers and/or half-sisters living elsewhere but who are still part of the "family." The ÉLDEQ 1998 data reveal that at 5 months of age, 3.4% of children living in "intact traditional" families had non-resident half-brothers or half-sisters. In the vast majority of cases (87%), these siblings were born of a previous relationship of the father (data not shown).[13]

11. For example, among mothers less than 25 years of age who were living with a partner, 74% were unmarried versus 38% of mothers 35 and over. In terms of language, 63% of couples who spoke mainly French at home were unmarried compared to about 15% who spoke mainly English or another language.

12. This category includes some families with a new spouse/partner of the infant's biological mother.

13. However, the frequency of contact the infant had with this family network outside the home was not measured. For a detailed portrait of the infant's family environment from birth, see no. 11 in this series of papers.

These data obviously present just a snapshot of the family structure of the infants. infants. The benefit of a prospective study such as ÉLDEQ 1998-2002 is that it provides a means of monitoring the path the family will be taking over time. In the context of increasing couple mobility, a well-established phenomenon, a large proportion of the children will undoubtedly see their family type change. Some will see their single mothers enter a new relationship, others will witness the break-up of their parents, and experience, at the very least for a certain period of time, life in a single-parent household or stepfamily. In the few months between their birth and the data collection wave, 2% of the infants had already seen a change in their family situation (data not shown).

The disaffection with marriage and increased family mobility observed in Québec and Western society in general raises numerous social, economic and legal questions. The family transitions which children are experiencing in their early childhood and the effect of these on their development will be better understood as the annual longitudinal data are analyzed. This survey will provide a means of examining how factors other than family structure influence the health and well-being of the children, such as family functioning, socioeconomic status, and involvement of the absent parent in the child's life.

3.2 Households with an "Absent" Father

Even if the majority of children from a broken family are in the mother's custody, many move back and forth between the households of their two parents. This context of family mutation has forced us to review the usual approach taken in large-scale surveys, which in general have focused exclusively on the members of the household or residence being surveyed. To describe the reality of children whose parents no longer live together, it is incumbent to examine more than one household.

In population surveys, one way to investigate the context of children whose parents have separated or divorced is to collect information on the non-residing parent from the respondent parent, namely by proxy. However, many studies have highlighted the deficiencies of this approach because of the divergence of the data gathered separately from the parents on subjects such as the involvement of the non-custodial parent or the financial support of the children (Braver *et al.*, 1991; Schaeffer *et al.*, 1991). Ideally, efforts should be directed towards collecting data from the non-resident parent as well.

ÉLDEQ 1998-2002 does precisely this. Certain data is collected on and from the absent biological parent to better discern his role in the life of the child. For the 1998 "volet" (Year 1) of the survey, three instruments were used to accomplish this. The first was the Absent Biological Parent section of the Computerized Questionnaire Completed by the Interviewer (CQCI). This obtained from the mother certain sociodemographic characteristics of the absent parent, such as age, education, and employment status. The second was Section VI in the Self-Administered Questionnaire for the Mother (SAQM), which asked questions about the biological father of the infant. This obtained information, again from the mother, on involvement of the absent parent in terms of contact with the child and financial support, and personal history such as antisocial behaviours manifested in childhood, adolescence or adulthood. Another section in the CQCI was aimed at gathering detailed information from the PMK on the family and conjugal history of the infant's parents. From data in this section we learned, for example, whether the parents not living together at the time of the baby's birth had maintained relations and if there had been any changes in custody since then. Finally, a Self-Administered Questionnaire for the (Absent) Father (SAQFABS)[14] was mailed to absent fathers whose addresses had been obtained. The topics covered in the 1998 SAQFABS were perception of the infant's temperament, father/child relationship, and psychological well-being and background of the father. Further questions on their involvement with the child were added in Year 2 (1999) of the survey.

The weighted data of ÉLDEQ 1998 reveal that 9% (n = 208)[15] of the 5-month-old infants were not living with their biological father in the household. This definition of a household with an "absent" father is strictly based on the usual place of residence and does

14. The interviewer asked the biological mother for the address and telephone number of the absent biological father only if the latter had contact with the child at least once a month. This was the case for 98 mothers in 1998. Three additional mothers furnished this information even though the father did not fulfill the above criterion. A little less than half the questionnaires for the absent fathers (SAQFABS) were returned, for a response rate of 46%.

15. Of these 208 households, 2 were foster families in which both the biological father and mother were absent.

not imply any reference to his emotional involvement or financial support. Furthermore, it implies no judgment on the nature of the relationship of the parents, who could be maintaining a relationship while not living together, a situation which will be documented in future years of the survey. In the meantime, the 1998 data reveal that there was a much higher proportion of "absent" fathers than ones undeclared on the birth certificate. Only 3.3% of respondents answered "No" to the question "Was (child's name)...'s father declared on his/her birth certificate?"

Certain characteristics of the non-resident fathers are presented here. Because of the high partial non-response rates in this part of the survey, and because fathers for whom we have information seem to differ from those for whom we do not have information, the data were not weighted and are presented only to describe the sample (see box below). Certain trends, however, can be extracted.

The mean age of absent fathers for whom we have these data (n = 113) was 28.8 years; 7% were less than 20 years of age, 19% were 35 and over. Approximately one in three (34%) did not have more than a high school education.[16] About eight in ten fathers (82%) had been employed in the 12 months preceding the survey, and a somewhat smaller proportion (71%) were working at the time of the survey. Unfortunately, there is no data on absent fathers in other large-scale surveys with which we can compare those derived from this sample.

16. More than half the absent fathers in the sample did not have a high school diploma; however, a certain proportion had pursued post-secondary studies.

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SUPPLEMENTARY INFORMATION

SOCIODEMOGRAPHIC INFORMATION ON ABSENT BIOLOGICAL PARENTS (*I.E.* NOT LIVING IN THE HOUSEHOLD)

Respondents living in households where one biological parent was absent were asked to respond to a questionnaire on sociodemographic characteristics of the non-custodial parent such as age, education and employment status. As in other data collected for this study, particularly those gathered from a second party, information on the absent parent may contain certain errors. We do not have information to test for bias in these sociodemographic data.

Of the 178 biological mothers not living with the biological father (excluding the two foster families), 130 furnished sociodemographic information on him, giving a response rate of 73%. The biological fathers for whom we do not have any such data present a very particular profile. The vast majority (95%) were designated "unknown," namely those whose identity were not indicated on the birth certificate (versus 26% for whom we were furnished sociodemographic data).[17] They had little, only occasional, or no contact at all with the infant (83% vs. 29%), and provided no financial support for the child (100% vs. 49%) (data not weighted). In contrast, the proportion of fathers who were living with the mother at the time of the birth was similar in both groups (17%). At first glance, the propensity of mothers to supply information on the biological father is not unusual when he is more involved with the child. However, the fact that the breakup of the couple was relatively recent - with all that implies in terms of tension between certain ex-spouse/partners - undoubtedly added to the difficulty in obtaining information both on and from certain fathers (see Note 8).

Of fathers for whom we were furnished data (n = 123), nearly 40% had contact such as partial custody, visits, telephone calls with the child, either every day or several times a week. A similar proportion (39%) were providing financial support for the child. It is noteworthy that similar to what has been seen in other studies (Veum, 1993), the percentage of fathers providing financial support tended to increase with the frequency of contact with the child. More than 6 out of 10 fathers (63%) who had contact with the child monthly, weekly or daily, was providing financial support, whereas very few fathers who had little or no contact with the child were doing so (6%, n = 3/52). Based on small, unweighted numbers, these results should be viewed with caution and are only here for purely descriptive purposes. Some of the trends observed in Year 1 may or may not be confirmed in subsequent years of the longitudinal study.

3.3 Brothers and Sisters

Having brothers and sisters constitutes an important dimension in the family environment of children. Being an only child, the eldest or youngest in a family, having one or more brothers and sisters, or growing up with children the same age - are all characteristics that can considerably influence family life and in turn the development of an individual child. Furthermore, parents' expectations and behaviours may differ according to birth order.

It should be emphasized here that the 1998 data mainly cover young families and a number of them will continue to grow. Therefore, a certain proportion of the infants will eventually see brothers or sisters joining their existing nuclear family. The data

17. The question of whether the father's name appeared on the birth certificate was only addressed to parents who were not living together at the time of the birth. We can therefore suppose that in the case of parents who were, the name of the father was indeed on the birth certificate.

SUPPLEMENTARY INFORMATION

SOCIODEMOGRAPHIC INFORMATION ON ABSENT BIOLOGICAL PARENTS (*I.E.* NOT LIVING IN THE HOUSEHOLD)

Respondents living in households where one biological parent was absent were asked to respond to a questionnaire on sociodemographic characteristics of the non-custodial parent such as age, education and employment status. As in other data collected for this study, particularly those gathered from a second party, information on the absent parent may contain certain errors. We do not have information to test for bias in these sociodemographic data.

Of the 178 biological mothers not living with the biological father (excluding the two foster families), 130 furnished sociodemographic information on him, giving a response rate of 73%. The biological fathers for whom we do not have any such data present a very particular profile. The vast majority (95%) were designated "unknown," namely those whose identity were not indicated on the birth certificate (versus 26% for whom we were furnished sociodemographic data).[17] They had little, only occasional, or no contact at all with the infant (83% vs. 29%), and provided no financial support for the child (100% vs. 49%) (data not weighted). In contrast, the proportion of fathers who were living with the mother at the time of the birth was similar in both groups (17%). At first glance, the propensity of mothers to supply information on the biological father is not unusual when he is more involved with the child. However, the fact that the breakup of the couple was relatively recent - with all that implies in terms of tension between certain ex-spouse/partners - undoubtedly added to the difficulty in obtaining information both on and from certain fathers (see Note 8).

Of fathers for whom we were furnished data (n = 123), nearly 40% had contact such as partial custody, visits, telephone calls with the child, either every day or several times a week. A similar proportion (39%) were providing financial support for the child. It is noteworthy that similar to what has been seen in other studies (Veum, 1993), the percentage of fathers providing financial support tended to increase with the frequency of contact with the child. More than 6 out of 10 fathers (63%) who had contact with the child monthly, weekly or daily, was providing financial support, whereas very few fathers who had little or no contact with the child were doing so (6%, n = 3/52). Based on small, unweighted numbers, these results should be viewed with caution and are only here for purely descriptive purposes. Some of the trends observed in Year 1 may or may not be confirmed in subsequent years of the longitudinal study.

3.3 Brothers and Sisters

Having brothers and sisters constitutes an important dimension in the family environment of children. Being an only child, the eldest or youngest in a family, having one or more brothers and sisters, or growing up with children the same age - are all characteristics that can considerably influence family life and in turn the development of an individual child. Furthermore, parents' expectations and behaviours may differ according to birth order.

It should be emphasized here that the 1998 data mainly cover young families and a number of them will continue to grow. Therefore, a certain proportion of the infants will eventually see brothers or sisters joining their existing nuclear family. The data

17. The question of whether the father's name appeared on the birth certificate was only addressed to parents who were not living together at the time of the birth. We can therefore suppose that in the case of parents who were, the name of the father was indeed on the birth certificate.

therefore do not paint a portrait of the size of the family in which the infant will grow up. However, they give us an idea of the number of older siblings[18] in the household at the time of the survey, when the infants were 5 months old.

As the data indicate in Table 3.2, a little over 40% of the infants in all types of families had neither a brother nor sister residing in the household at the time of the survey, and only 6% had 3 or more brothers or sisters. However, the number of siblings was significantly associated with family structure. Singleton children were more prevalent in families with a single mother (53%) than in two-parent ones (41%). Conversely, infants in stepfamilies had more siblings - nearly half (49%) had at least two brothers or sisters, versus 18% for all types of families (data not shown).

Table 3.2
Distribution of Infants by Number of Brothers or Sisters Usually Living in the Household,[1] 1998

	n	%
No brother or sister	926	41.7
1 brother or sister	889	40.0
2 brothers or sisters	273	12.2
3 and more	135	6.1
Total	**2,223**	**100.0**

1. The number of brothers or sisters includes biological ones, half-brothers and half-sisters, step-brothers and step-sisters, adopted brothers and sisters, and brothers and sisters in a foster family usually living in the household.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

Table 3.3 presents the distribution of infants by age of siblings. As the table shows, of infants who had *at least one brother or sister*, more than 80% were in a family where these siblings were of pre-school age (less than 6 years old) - in the majority of cases (67%), these children were the eldest in the family. Of infants with siblings, nearly one in 6 (16%) had none of pre-school age but at least one brother or sister 6-11 years of age. Three percent had only much older siblings, namely at least one brother or sister 12 years of age or over. Of the infants who had siblings, thirty-five per cent (28.2% + 6.8%) had siblings close to them in age (*i.e.* under 3 yrs), namely one in five of all infants (16.5% + 4%).

Demographic characteristics of siblings in the 1998 data were closely related to the conjugal history of the parents. Infants in stepfamilies had siblings with a wider age range. Thirty percent of infants in stepfamilies had a least one brother or sister 12 years of age or over, versus 10% in single-parent families and only 2%[19] in intact two-parent families. Infants with at least one brother or sister under three years of age tended to be in two-parent families, intact or step, rather than single-parent ones (25% vs. 13%, $p < 0.05$) (data not shown). Given the low numbers, estimates for single-parent families should, however, be considered descriptive only.

Table 3.3
Distribution of Infants by Age of Siblings Usually Living in the Household, 1998

	All Infants	Infants with Siblings
	%	
No brother or sister	**41.7**	–
All, < 6 yrs	39.2	67.2
All, < 3 yrs	16.5	28.2
All, 3-5 yrs	18.8	32.2
< 3 yrs and 3-5 yrs	4.0	6.8
Youngest < 6 yrs, oldest 6-11 yrs	5.8	10.0
Youngest < 6 yrs, oldest 12 and + yrs	2.3*	3.8*
Sub-total, youngest < 6 yrs	**47.3**	**81**
All, 6-11 yrs	7.4	12.7
Youngest 6-11 yrs, and 12 yrs and +	1.8*	3.1*
Sub-total, youngest 6-11 yrs	**9.2**	**15.8**
Youngest, 12 yrs and +	**1.8***	**3.2**

* Coefficient of variation (CV) between 15% and 25%; interpret with caution.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

18. Derived from the chart of family relationships in the household, a section of the CQCI, this indicates the number of siblings for whom the household is the usual place of residence. Consequently, brothers and sisters whose usual place of residence is elsewhere, and who were therefore not living in the household at the time of the survey (as indicated by the PMK), were not considered siblings. Most of these "omissions" relate to children born of a previous relationship of the father, who were not living full-time in the household (see Section 3.1).

19. Given the low numbers observed, this result should be viewed with caution.

Infants with brothers or sisters have parents who are already experienced with children. They therefore experience family life differently than singletons or firstborns. It can be expected that the proportion of infants who have neither a brother or sister will decrease as the families complete their growth cycle. It is very likely, however, that only a minority of infants will have more than one brother or sister. If the trends observed in 1998 continue, only a third of mothers with two children will have another child (Thibault, 1999).[20]

20. A question on intentions of having more children was asked of mothers in the Year 2 (1999) of ÉLDEQ 1998-2002 (children 17 months of age).

4. Age of the Parents

The sociodemographic characteristics of parents are important because they are recognized as being determinants of the health status and well-being of children, as well as indicators of the family's standard of living. For example, the age of the parents is an important factor in child development. Education, income and work experience in young parents, especially single mothers, is generally less than that of older parents (Ross *et autres*, 1996). In Canada low birth weight is higher for teenage mothers than for those 20 to 34 years of age (Ng and Wilkins, 1994), partly because of differing lifestyle habits during pregnancy. At the other extreme of the age spectrum, late first pregnancy, at 35 years of age and over, may also increase the risk of certain negative effects on the health and well-being of both mother and child (for a review, see McNab *et autres*, 1997).

In ÉLDEQ 1998, the mean age of the infants' mothers and fathers was 28.8 and 31.9 years respectively at the time of the survey (data not shown). As seen in Table 4.1, approximately 3% of the infants had teenage mothers, *i.e.* under 20 years of age. The majority of infants were living with mothers (63%) and fathers (61%) who were 25-34 years of age. Nearly one in seven (14%) had a mother 35 years of age or over, and more than three in ten a father in that age group. Teenage mothers were relatively more likely to be single mothers; nearly half (47%) of mothers under 20 years of age were not living with a spouse/partner at the time of the survey, compared to only 10% of those aged 35 and over (data not shown). Though the proportion of firstborns tended to decrease as the age of the mother increased, there was still a certain number of firstborns in older mothers. A quarter of infants born to mothers 35 years of age and over were firstborns, representing 8% of all firstborns (data not shown).

Many studies have shown that the age of the mother at which she first gives birth, particularly in teenage mothers, plays a key role in her family, work and financial life-path. Early parenthood is associated with increased couple mobility (Desrosiers & Le Bourdais, 1991; Desrosiers et autres, 1995; Martin & Bumpass, 1989) and has high social costs - interrupted education for the mother, and recourse to social assistance for two-thirds of mothers under 20 years of age (Charbonneau *et autres*, 1989).

Table 4.1
Distribution of Infants by Age Group of Parents at the Time of the Survey, 1998

	Mother		Father[1]	
	n	%	n	%
< 20 yrs	74	3.3	10	0.5**
20-24 yrs	440	19.8	163	8.0
20-29 yrs	678	30.5	545	27.0
30-34 yrs	723	32.6	693	34.3
35-39 yrs	253	11.4	438	21.7
40 yrs and +	54	2.4*	172	8.5
Total	**2,222**	**100.0**	**2,021**	**100.0**

1. Biological father or spouse/partner living with the mother at the time of the survey.
* Coefficient of variation (CV) between 15% and 25%; interpret with caution.
** Coefficient of variation (CV) higher than 25%; imprecise estimate for descriptive purposes only.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

ÉLDEQ 1998 gathered information on the age of mothers when their first child was born. For mothers of firstborns, their "career" of motherhood obviously began just a few months before the collection of data. However, for a number of mothers, the infant was not their firstborn, and some had also given birth for the first time at a young age. In this regard, the data reveal that 11% of the mothers had first given birth before the age of 20 years. Therefore, the proportion of women who had been teenage mothers was higher than a first glance at the 3% figure may indicate. In contrast, nearly a quarter (23%) of infants were born to mothers who had become first-time mothers at the age of 30 years or more. The mean age of the mother at the first birth was lower in "non-traditional" families, namely 22.3 years for single mothers and 23.3 years for mothers in a stepfamily, versus 26.4 years for those in intact two-parent families in which all the children had been born to the current couple (data not shown). These results reveal the strong link between reproductive and conjugal history.

5. Ethnocultural Belonging

The cultural landscape of Québec has changed considerably over the course of recent decades. The ÉLDEQ children, particularly those who will grow up in urban centres, will be much more likely to socialize with people from various cultural and linguistic backgrounds than children who were growing up 20 years ago.

The influence of ethnocultural background on the health and development of children is quite complex. Studies on the subject have obtained more or less similar results. Some conducted during the 1980s reveal that children in immigrant minorities have a higher risk of social and school maladjustment than children of Québec families who have been here for many generations (for a review, see Terrisse *et autres*, 1994).

However, other studies reveal that immigrant children are in as good health as native-born Canadians. Compared to the latter, the former are less likely to present conduct disorder (Tremblay & Baillargeon, 1984), be hyperactive or have emotional problems, and are more successful in school (Beiser *et autres*, 1998). It requires prudence, however, in comparing these divergent results because many of these studies have tended to look at very different situations. A part of the discrepancy observed can be attributed to the heterogeneity of the populations being compared. Like children of Québec families who have been here for many generations, children in ethnocultural communities are not a homogeneous group. The duration of residence can be just as important as the country of origin. Health status, certain lifestyle habits, and recourse to using formal and informal support networks tend to change the longer people in these communities have lived in Canada (Kobayashi *et autres*, 1998).

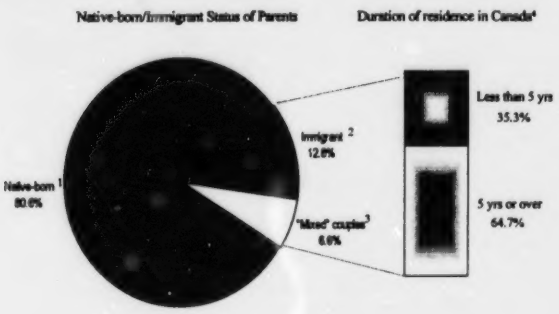
ÉLDEQ 1998 collected information which establishes the ethnocultural background of the PMK and his/her spouse/partner in terms of first language learned, languages spoken, ethnic origin, immigration status, birthplace, etc. Only ethnic origin was recorded for the 5-month-old infants. The characteristics described here are the immigration status of the parents and duration of their residence in Canada, ethnic origin of the infant, and languages spoken at home. It should be emphasized again that all the ÉLDEQ infants were born in Québec.

As seen in Figure 5.1, 80% of the infants' parents were born in Canada, irrespective of their ethnic origin. Thirteen percent had immigrant parents, whereas 7% were born of a "mixed" couple (one immigrant parent, the other native Canadian). Among infants with immigrant parents (one or both), more than a third were living with a parent who had immigrated to Canada less than 5 years ago.[21] It is interesting to note that the majority of immigrant parents, nearly 80%, had family origins other than "European" (data not shown).[22] This large proportion reflects the significant change in the countries of origin of immigrants since the 1960s, with increasing numbers coming from non-"European" countries (Chen *et autres*, 1996).

21. With regards to duration of residency, this is an approximation of the number of years that have passed since the person first immigrated to Canada. Only about 1% of the mothers or fathers (8% of immigrant parents) were not landed immigrants.

22. Because of the small numbers and a desire to be concise, only two groups of immigrant parents have been differentiated. So-called "European" immigrants are defined as those from Europe but also from the United States, Australia and New Zealand. Non-"European" immigrants are defined as those whose birthplace was anywhere else. The distinction between these two groups is based on a study by Chen et autres (1996). In justifying this grouping, the authors indicate that "European" immigrants possess, compared to other immigrants, cultural backgrounds and lifestyles that are more like those of native-born Canadians. They suggest that with regards to both health status and type of health care, so-called "European" and non-"European" immigrants exhibit considerable differences.

Figure 5.1
Distribution of Infants by Immigrant Status of Parents and Duration of Residency, 1998



1. Both spouses or single parent born in Canada.
2. Both spouses or single parent born in another country.
3. One spouse born in Canada, the other in another country. By definition, this category comprises infants living in two-parent families only.
4. Number of years that have passed since their first arrival as immigrants in Canada. The category "Less than 5 yrs" comprises families in which at least one parent had been in the country for less than 5 years.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

The data on the ethnic background of infants include those whose parents indicated a single ethnic origin and those who indicated more than one. Ethnic origin was elicited by the following question "To which ethnic or cultural group do ... *(name of child)*... 's ancestors belong?" The data obtained from the PMK was therefore a function of how she interpreted the term "ancestors." For example, some children born of native-born francophones whose families have lived in Québec for generations could have been designated by their parents as Canadian or French Canadian, whereas others might have said they are of French descent (*i.e.*, from France).

As indicated in Table 5.1, more than two-thirds of infants were described as being of Canadian origin. The second highest group was composed of infants whose parents claimed French descent - three in ten PMKs indicated France as at least one of the countries of origin of their ancestors. About 10% were declared to have European ancestry other than French or "English" (*i.e.*, British, Irish, Scottish), and slightly smaller percentage (7%) to have "English" (British, Irish, Scottish) ancestry. Other declared origins, each under 5%, were African/Haitian (4%), aboriginal (Amerindian) (3%), Spanish-speaking (of the Americas) (2.2%), and Arab (Maghreb/Middle East) (2.1%). The percentage of infants whose parents indicated another origin was relatively high - approximately one in eight (13%). In all, 18% did not belong to one of the "majority" ethnocultural groups, Canadian, French or "English" (British, Irish, Scottish) (data not shown).

Table 5.1
Distribution of Infants by Ethnocultural Origin, 1998

	n	%[1]
Canadian	1,493	67.7
French	678	30.7
Other "European"[2]	232	10.5
British, Irish, Scottish[3]	164	7.4
African/Haitian	78	3.5
Aboriginal	62	2.8
"Spanish-speaking" (of the Americas)	48	2.2*
Arab (Maghreb/Middle East)	47	2.1*
Other[4]	295	13.4

1. The percentages are based on 2,206 infants for whom information is available. **The total is higher than 100% because some respondents declared more than one ethnic origin.**
2. Includes Dutch, German, Italian, Polish, Portuguese, Ukrainian, Spanish and "Jewish."
3. Includes British, Irish, Scottish.
4. Includes "Chinese or South Asian," "Métis" and "Inuit/Eskimo," each representing respectively 1.5% or less of ethnic origins declared as well as "Other."

* Coefficient of variation (CV) between 15% and 25%; interpret with caution.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

Information furnished by the PMK on language most often used at home casts further light on the ethnocultural origins of the infants. As indicated in Table 5.2, 8% were in a household in which the parents spoke only a language other than French or English most often at home.

Table 5.2
Distribution of Infants by Language Spoken Most Often at Home by the Parent(s), 1998

	n	%
French only	1,669	75.2
English only	224	10.1
Neither French nor English	179	8.1
French and English only	71	3.2
French or English, and another language	76	3.4
Total	**2,219**	**100.0**

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

There was a higher concentration of infants in families whose parents who spoke neither French nor English (most often at home) on the island of Montreal (23%) than elsewhere, and this group accounted for 79% of this category for the whole province (data not shown).

Table 5.2 reveals that 75% of infants were in households where French, Québec's official language, was the only one spoken at home; 18% were in households where other languages took precedence.[23] In the medium term, it will be interesting to see whether the languages to which the infant has been exposed or the fact of having learned more than one language in early childhood plays a role in adjustment to school. Although ÉLDEQ 1998-2002 was not designed for detailed analysis of the association between ethnocultural origin and child development, information gathered over the years of the study will cast further light on the influence of the aforementioned cultural characteristics on parenting practices, use of health and social services and other facets of the child's life.

23. Namely 8% of households in which the language spoken most often was neither French nor English, plus 10% where English was the main language used at home.

6. Socioeconomic Characteristics of the Families

Education is a key component of the socioeconomic status of individuals. As a general rule, people with more education have a better chance of obtaining higher-paying employment, particularly in the rapidly-changing social and economic context into which the ÉLDEQ infants were born. Numerous studies reveal a strong association between educational level of the mother and cognitive skills (Lefebvre & Merrigan, 1998) or scholarly achievement of the child (Haveman & Wolfe, 1995), independent of other risk factors. However, though education is strongly correlated with income, some studies reveal that they each have a distinct effect on health. For example, more educated people tend to be in better health, irrespective of their income and lifestyle habits, and education mitigates certain effects of poverty (Ferland & Paquet, 1995). In addition to education and income, employment status of the parents is an important component of young families' standard of living. This section presents various indicators of the socioeconomic status of the parents in light of the type of family at the time of the survey.

6.1 Education

As the data in Table 6.1 indicate, approximately one in six parents, mother or father, did not have a high school diploma. One in four had obtained a university degree. The apparent similarity observed in the fathers and mothers in all types of families camouflages the heterogeneity of the couples - in 60% of two-parent households, the parents had varying levels of education (data not shown). Combining information on the mother and spouse/partner, 11% of infants were in households where no parent had finished high school. The difference between single-parent and two-parent families was quite striking; 44% of the former had this aforementioned characteristic, whereas only 7% of the latter did (data not shown). Less educated, and as we have seen, often younger, single mothers were, however, more likely to be attending an educational institution at the time of the survey, 12% compared to 7% of mothers in two-parent families ($p < 0.05$; data not shown).

Table 6.1
Distribution of Infants by Education of the Mother and Father, 1998

	Mother		Father[1]	
	n	%	n	%
No high school diploma	396	18.0	351	17.6
High school diploma	757	34.1	682	34.1
Some post-secondary studies	504	22.7	429	21.4
Vocational/technical school diploma	238	10.7	231	11.5
College diploma	280	12.6	242	12.1
University degree	546	24.6	494	24.7
Total	**2,219**	**100.0**	**2,000**	**100.0**

1. Biological father or spouse/partner living with the mother at the time of the survey.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

6.2 Employment Characteristics of the Parents

Employment status of the parents constitutes a key indicator of the well-being of their children. The association between employment activity of the parents and child development can be direct or indirect. Paid employment or lack thereof can directly influence the physical and mental health status of the parents, time available for the child, parenting practices and child-rearing behaviours, etc. Employment status can also have an indirect effect on the health and well-being of individuals in terms of disposable income. Furthermore, lack of adaptation in the labour market to the needs of families and lack of low-cost,[24] quality daycare services for very young children can generate tension in working parents, who must balance responsibilities at home and at work. Despite changes observed in recent decades in terms of sharing family and housekeeping responsibilities, mothers still face the bulk of responsibility for caring and raising

24. Since 1997, universal $5-a-day daycare services and free daycare for certain categories of low-income families have been progressively implemented in Québec. By September 2000, these services will be available to all children of pre-school age, including those under 18 months *(ministère de la Famille et de l'Enfance*, 1999). The ÉLDEQ children and their parents will therefore experience the pre- and post-implementation of these services (see Section 7).

children, and are therefore particularly susceptible to the stress of having what are essentially "two jobs" (Fast & Frederick, 1996). In 1997 in Québec, 56.5% of mothers of children under 3 years of age were employed, and 39.7% had a full-time job (*Conseil de la famille et de l'enfance et autres*, 1999).

In spite of difficulties balancing work and family responsibilities, on the whole, mothers who work outside the home may experience less stress and depression than those who stay at home (McKim *et al.*, 1999; Weitzman & Fitzgerald, 1993), and for both working mothers and fathers, the family and parenting benefits having a job outweigh the disadvantages (Royer *et autres*, 1998). Working may indeed be a choice, not only a necessity (McKim *et al.*, 1999). Furthermore, work schedule, number of hours spent at the workplace and "prestige" associated with the job can all play a role in the varying degrees of stress and satisfaction experienced by working parents (Livingston & Burley, 1991).

ÉLDEQ 1998 has provided a rather detailed portrait of the employment activity of the parents at the time of data collection and the preceding 12 months. Employment data cover both the PMK and the spouse/partner. Questions in this section of the survey focus on employment status at the time of data collection, number of weeks worked, hours of work and nature of work schedule (*i.e.* shift, 9-5, etc.) of the main job held in the preceding 12 months. A section exclusive to the biological mother provides information on whether she had returned to work after the birth of the child and if so, the age of the infant at the time, and the number of hours worked. Since in 1998 most mothers were not working at the time of the survey, either because they had not yet entered the workforce or were on leave, details on their employment activity are not described here. The 1999 data will provide more in-depth analyses of the employment profile of the parents. Detailed information gathered on the parents' work histories can then be correlated with other data such as child care arrangements (see further in the text).

In the meantime, the 1998 data indicated that in 70% of the two-parent families, both parents had had at least one job in the year preceding the survey; in 4%, neither parent had had a paying job in the same timeframe (Table 6.2). As indicated in the table, it was far more likely that a parent had not been employed in the previous year in a single-parent family than in a two-parent one. Among single mothers at the time of data collection, nearly 70% had not worked in the preceding 12 months.

Table 6.2
Distribution of Infants by Employment Status of Parents in the 12 Months Preceding the Survey, and by Type of Family, 1998

	Two-parent families		Single-parent families	
	n	%	n	%
Both parents had worked[1]	1,394	69.5	...	...
One parent had worked [1]	525	26.2[2]	62	31.4
No parent had worked	87	4.3	136	68.6
Total	**2,006**	**100.0**	**198**	**100.0**

1. Parents who had had a job at any time in the 12 months preceding the survey.
2. In 94.2% of cases, it was the father.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

Mothers comprised 86% of parents who had not worked in the previous year. Among these, almost all (94%) indicated that "caring for the family" was their main activity at the time of the survey. Among fathers not working, slightly more than a third were "caring for the family" (36%), 30% were looking for a job, and the remaining third reported another principal activity (*e.g.*, school, convalescence, other, etc.) (data not shown).

In answer to the question "What do you consider to be your/his main activity at the present time?," the vast majority of mothers (85%) answered caring for the family; 13% said working. In contrast, the presence of the infant seemed to have had little effect on the employment status of fathers; "caring for the family" was declared the main activity for only 6% of them when the 1998 survey was conducted (see Table 6.3).

Table 6.3
Distribution of Infants by Main Activity of Parents at the Time of the Survey,[1] 1998

	Mother		Father[2]	
	n	%	n	%
Caring for the family	1,880	84.7	126	6.3
Working (paid employment)	72	3.2	1,285	63.7
Caring for the family and working	212	9.5	406	20.1
School	46	2.1*	71	3.5
Other[3]	11	0.5**	129	6.4
Total	**2,221**	**100.0**	**2,017**	**100.0**

1. Refers to what the PMK considered the main activity of the mother and spouse/partner living with her at the time of the survey.
2. Biological father or spouse/partner living with the mother at the time of the survey.
3. Includes looking for work, convalescence or other unspecified activities.

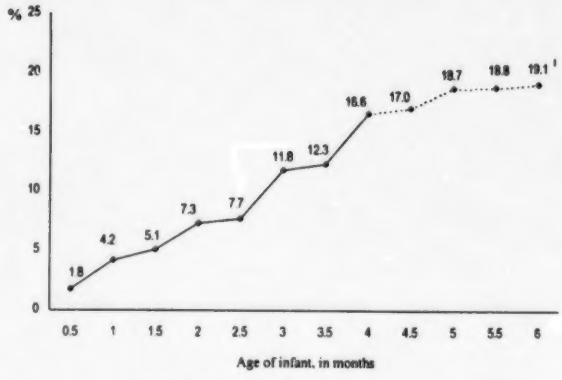
* Coefficient of variation (CV) between 15% and 25%; interpret with caution.

** Coefficient of variation (CV) higher than 25%; imprecise estimate for descriptive purposes only.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

Figure 6.1 shows the cumulative percentage of infants whose mother had started or returned to work since the birth, by age of the infant. At one and a half months, 5% of the mothers had entered or returned to the workforce. This percentage more than doubled (12%) when the child had reached the age of 3 months, and rose to 17% at the age of 4 months.[25]

Figure 6.1
Cumulative Percentage of Infants whose Mother had Worked at Any Time Since the Birth, by Age of Infant, 1998

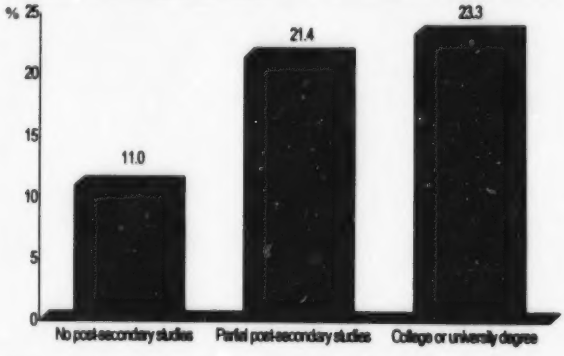


1. The percentages between 4 and 6 months may be slightly underestimated, some infants not having attained the age indicated on the x-axis at the time of the survey.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

The employment status of the mothers was strongly associated with both their level of education and the type of family (see Section 6.1). Compared to mothers lacking post-secondary education, those who had it were twice as likely to have worked since the birth of the infant (Figure 6.2). Twenty-one percent of mothers in two-parent families had worked versus 8% of mothers who were single parents ($p < 0.05$; data not shown). No significant association was observed between employment status of mothers and job category, age of mother or birth order of the infant.

Figure 6.2
Proportion of Infants whose Mothers had Worked Since the Birth, by Education of the Mother, 1998



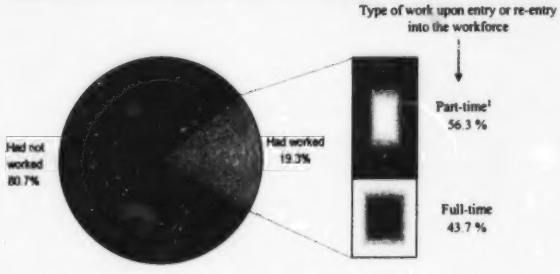
Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

25. Among mothers who had not worked since the birth of the child, 60% indicated having had a job in the 12 months preceding the survey, and were, it is presumed, in the workforce before the birth (data not shown). Data gathered in future years of ÉLDEQ 1998-2002 will document when these mothers return to work since some, it can assumed, were on maternity leave at the time of the survey. We will also have this same type of data for mothers who had not worked or returned to work in the year preceding this 1998 survey.

The low proportion of single or less educated mothers who were working may in part be due to the opportunity costs related to having a job, such as transportation, child care, eating out, loss of social assistance, etc. For mothers with little education, limited work experience and few qualifications, particularly single mothers, the fact of having to stay at home to care for the baby or going to school may simply prove to have a greater return than working for low pay, given the above expenses. In contrast, the type of employment more educated mothers have may also play a role in their decision to work or rapidly re-enter the workforce, given that certain jobs offer such perks as maternity leave, job security, flexible hours and workplace, all of which are more adapted to raising a family (Villeneuve-Gokalp, 1989).

The 1998 ÉLDEQ data indicate the number of hours a week the mothers were working after the birth of the child, whether at a first-time job or returning to the workforce. As shown in Figure 6.3, more than half of mothers who had returned to work did so to a part-time job. At first glance, we might think that opting for part-time work was the result of a choice as a time-management strategy to balance home and work responsibilities, which could have been in place before the birth. However, studies have suggested that some mothers may find themselves forced to take part-time work, since they can find nothing better (Desrosiers & Le Bourdais, 1991). In ÉLDEQ, the motivations for mothers working part-time will be documented beginning in 2000 (children 29 months of age).

Figure 6.3
Mothers' Employment after the Infant's Birth, 1998



1. Less than 30 hours a week.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

In the meantime, the 1998 data suggest that job status and flexible working hours related to certain types of work played an important role in the mothers' choosing full- or part-time work.

Among all the variables examined, occupational category was the only one significantly associated with the number of hours worked. Mothers who had more professional-level jobs or held management positions were more inclined to have worked full-time (52%) than those who held general office or service jobs (35%), the latter two generally more available on a part-time basis ($p < 0.05$; data not shown). Re-arranging work time to respond to family obligations is still, in large part, left to mothers, since the data show that only 3.9% of fathers had part-time work (data not shown).

On first reading, therefore, the balancing act between work and family that mothers of very young children engage in seems to be strongly associated with their socioeconomic status (education, job category) and opportunities in the workforce. Mothers' perceptions of their role as parents can also, it is clear, orient the employment paths they take when they have young children (McKim *et al.*, 1999).

Although the 1998 data do not reveal the aspirations and preferences of the parents with regards to work, they make it possible to explore links between work and perceptions of maternal behaviours, such as being an effective parent, having an impact on the child's development, being "over-protective," etc. Other important determinants in child development such as the well-being and social adjustment of the parents in relation to their employment status have also been studied (see no. 9 in this series of papers). Job satisfaction and certain aspects of the work/family balance will be investigated in future years of this longitudinal survey.

6.3 Income

The mean net income of Québec families in constant dollars has declined slightly since 1981, from $42,242 in 1981 to $40,127 in 1996 (*Conseil de la famille et de l'enfance et autres*, 1999). A high proportion of children continue to live in poverty. In 1996, 18% of Québec children under 18 years of age lived in families below the poverty line (22% before taxes) *(Institut de la statistique du Québec*, 1999). Furthermore, increasing numbers of young families have been resorting to food banks in recent years (Langlois, 1990; *ministère de la Santé et Services sociaux*, 1992).

Growing up in a financially secure family does not necessarily mean that a child is sheltered from future physical, social or emotional problems. Yet financial insecurity remains a source of stress for families. A number of studies reveal a significant gap between children of poor families and more financially secure ones in terms of health and well-being. This is particularly pronounced at the beginning of life, namely the perinatal period (Colin & Desrosiers, 1989; House *et al.*, 1990).

This is why in Québec the optimum development of children living in poverty is at the core of numerous policies, programs and preventive interventions. The report of the task force on children (*Rapport Bouchard, 1991, Un Québec fou de ses enfants*) and the policy papers entitled *Politique de la santé et du bien-être, 1992* and *Les Priorités nationales de santé publique 1997-2002* underlined the need to intervene as early as possible in order to prevent health and adjustment problems in disadvantaged children and their families. Numerous preventive programs, such as *Naître égaux - Grandir en santé* ("Born Equal - Growing up Healthy"), *OLO - oeuf, lait, orange*"(Egg, Milk, Orange") and *1,2,3, GO* (some borrowing from American initiatives), have been implemented with these goals in mind.

In ÉLDEQ 1998, many facets of the financial situation of the household in which the child is growing up were documented - main source of income (an indicator of financial security), income level, and PMK's perception of the household's financial situation. An indicator of socioeconomic status combining information on education of the mother and father, occupational prestige and household income, was also derived from the data (see Section 6.4).

Source of Income

Table 6.4 provides a portrait of the household's main source of revenue. Employment or self-employment was the main source of income for more than 80% of the infants' households. For 10% of households, social assistance (welfare) was the main source. This was the case for 50% of teenage mothers, and 62% of single mothers (data not shown).

Table 6.4
Distribution of Infants by Main Source of Household Income, 1998

	n	%
Salaries and wages	1,671	76.2
Self-employed	164	7.5
Social assistance (welfare)	254	11.5
Employment insurance	41	1.9*
Other[1]	64	2.9
Total	**2,194**	**100.0**

1. "Other" includes alimony, workmen's compensation, dividends and interest, child benefits and other government allowances, rental income, pensions, scholarships and bursaries, and other unspecified sources of income.
* Coefficient of variation (CV) between 15% and 25%; interpret with caution.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

Income level

In ÉLDEQ, income is defined as the gross revenue in the past 12 months, namely before taxes and deductions, of all the people usually living in the infant's household. It includes payments received from the federal and provincial government such as employment insurance, social assistance (welfare) and various child benefits.

As shown in table 6.5, approximately one third of infants were in households where gross annual income was under $30,000, and slightly less than a third where it was $60,000 or more.

Table 6.5
Distribution of Infants by Household Income, 1998

	n	%
< $30,000	714	32.8
$30,000 - $59,000	861	39.6
$60,000 and +	601	27.6
Total	**2,176**	**100.0**

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

To obtain a more accurate picture of the family's standard of living, it is incumbent to take into account the number of people in the household who use this income for their subsistence. Statistics Canada sets a Low-Income Cut-Off (LICO) every year using this parameter and the size of the

region where the household is located.[26] Even though Statistics Canada takes great pains to emphasize that this is not an official poverty line, the low-income cut-off remains the most widely-used measure of the incidence of poverty in Canada.[27]

Nearly 3 out of 10 infants (28%) in ÉLDEQ 1998 were in households where income was lower than the low-income cut-off.[28]

As indicated in Table 6.6, infants were more likely to live in low-income households where the mother was young, less educated, or where neither or just one parent had had a job in the 12 months preceding the survey. Low-income status was also more prevalent in single-parent families, and to a lesser extent, in stepfamilies and those with 3 or more siblings. Furthermore, low-income families were more likely to speak a language other than French or English at home (70% vs. 24%) (data not shown).

It is noteworthy that 8% of families in which the mother had a university degree, and 9% of families in which both parents had worked in the preceding 12 months, were living below the low-income cut-off. The latter case represented approximately 30% of low-income families. These data indicate perhaps the emergence of a new type of poverty in a context of low job security, one that affects people with relatively good education. The data also illustrate the links among marital status, type of family, employment paths and financial situation of individuals (Picot, Zyblock & Pyper, 1999).

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26. These thresholds represent the sums of money needed for certain so-called subsistence expenses such as food, clothing and shelter. According to Statistics Canada, a family unit is considered low-income if its income is lower than the value of the threshold set for the family's size and region.

27. However, it should be noted that in 1998, a joint federal-provincial committee with Human Resources Development Canada proposed a preliminary market basket measure of poverty - a basket of market-priced goods and services - that according to some observers, constitutes the first real instrument to measure poverty in Canada. In contrast to the LICO, it is not a calculation of household's average expenses, but of the real cost of a "basket" of goods and services designated as essential. However, for some observers, this new measure is just as arbitrary as the LICO in establishing acceptable levels of income for a society (Laliberté, 1999). The LICO does not constitute a minimum requirement for life but a measure of relative privation. It is a threshold indicating at what income level individuals and families can be eligible for a "helping hand from tax credits and transfer programs" (Laliberté, 1999, p. A 6).

28. ÉLDEQ attributes an income level indicator to each household based on the total gross income of the household in the year preceding the survey, the number of people comprising the household, and the low-income cut-off before taxes set by Statistics Canada (1992 - base year) for the reference year 1997. Several aspects of ÉLDEQ 1998-2002's measures of income need further explanation. The thresholds established by Statistics Canada are based on the income of the so-called economic family. The data gathered in this survey are not based on the "economic family," but on household income. However, similar cross-Canada data from the NLSCY (National Longitudinal Study of Children and Youth - Canada) reveal the equivalence of these two concepts for nearly all households (98.5%). In other words, there was only one economic family per household (Statistics Canada and Human Resources Development Canada, 1995). Furthermore, similar to the NLSCY, data on household income is gathered using a single question addressed to the PMK, requesting an estimate of the total income from all sources of all members of the household. It seems, therefore, that such a method can result in an underestimate of total income, and consequently a slight overestimate of the number of infants in households living below the low-income cut-off (for more detail, see Statistics Canada and Human Resources Development Canada, 1995, Section 8.5).

Table 6.6

Proportion of Infants in Households below the Low-Income Cut-Off,[1] and Distribution of Infants in Low-Income Households, by Certain Sociodemographic Characteristics, 1998

	Proportion of infants in households below the low-income cut-off, by category	Distribution of infants in low-income households	Number of infants
	%		n
Age group of the mother			
< 20 yrs	76.3*	8.7*	69
20-24 yrs	42.9	30.4	425
25-29 yrs	23.1	25.7	669
30-34 yrs	17.4	20.7	713
35 yrs and +	28.9	14.5	302
Educational level of the mother			
No high school diploma	58.7	38.1	388
High school diploma	30.8	37.8	736
Vocational/technical school diploma	25.4	10.0	236
College diploma	15.3*	7.0*	274
University degree	7.8 *	7.1*	541
Type of family			
Intact, two-parent	20.7	60.8	1,742
Stepfamily	31.6	12.6	238
Single-parent	82.4	26.6	191
Number of siblings			
None	23.2	34.9	905
1 brother or sister	28.7	41.8	876
2 brothers or sisters	25.4	11.2	266
3 and +	55.3	12.2	132
Employment status in the 12 months preceding survey			
Two-parent families			
Both parents working[2]	9.3	29.4	1,375
One parent working[3]	43.2	51.0	508
No parent working	99.1	19.6	85
Single-parent families			
One parent working	61.3*	23.0*	59
No parent working	94.4	77.0	128
Total	**27.6**	**100.0**	**2,179**

1. Estimates based on the low-income cut-off set by Statistics Canada for the reference year 1997 (1992 baseline).
2. Parents having had at least one job in the 12 months preceding the survey.
3. In 94.2% of cases, it was the father or mother's spouse/partner.

* Coefficient of variation (CV) between 15% and 25%; interpret with caution.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

It should be noted that the low levels of income in certain households may have been due to their specific financial situation at the time, since the birth of a child can often lead to added expenses. The addition of a new family member, combined with the loss of or decrease in income (*e.g.* triggered by maternity leave for a working mother), can be sufficient enough to push a household below the low-income threshold. Data from the first cycle of the NLSCY, which was conducted on nearly 23,000 Canadian children 0-11 years of age, indicated that the probability of a baby being poor is 20% higher than that of an eleven-year-old (Ross *et autres*, 1996). The path the ÉLDEQ infants take towards living in a lower or higher income situation will be documented over the course of the longitudinal study.

6.4 Other Social Stratification Measurements in ÉLDEQ 1998

Perception of Financial Situation

To provide a better evaluation of the socioeconomic situation of the families and the potential impact of poverty, ÉLDEQ 1998 used social stratification measurements in addition to the LICO, namely the perception of the PMK (who was the mother in virtually all interviews) of the household's financial situation and the duration of this situation. These subjective measurements are important because they reflect the needs and expectations of individuals. In contrast to results derived only from declared income, deductive measurements of perception of financial security provide an insight into many important elements such as indebtedness, black market ("under the table") income, tax evasion, and financial or material assistance families may receive following the birth of a child. The question on the duration of the situation indicates whether the families perceive they are living in chronic poverty or are experiencing temporary financial difficulty (Ferland & Paquet, 1995).

In 1998, 28% of the PMKs perceived they were financially secure compared to other people the same age, 63% judged their income as sufficient to meet basic needs, 7% perceived themselves as poor, and approximately 1% very poor.[29] In the latter two groups, the majority (79%) perceived they had been in this situation for less than 5 years, namely 27% for less than a year, and 52% for a period ranging from one to four years (data not shown). The concentration of PMKs who perceived their poverty as transient may be linked to the fact their families were young.

It is important to note that similar to what has been observed in Québecers aged 15 or over, the association between perception of financial situation and income level was rather weak in low-income households (Ferland & Paquet, 1995). In ÉLDEQ 1998, only slightly more than a quarter of the PMKs with an income below the LICO (as defined by Statistics Canada) perceived themselves as poor or very poor compared to other people the same age. Conversely, there was a very high association between perception of financial situation and income level in PMKs whose declared household income was above the LICO, 98% reporting having enough income to meet basic needs or being financially secure. Thirty-six per cent of PMKs who considered themselves poor or very poor said their situation would improve in the near future (data not shown).

The differences observed between declared income and the perception of financial situation may be attributed to a number of factors such as under-reporting of income, barter, assistance given to young families, etc. It must also be noted that perception of financial situation was asked of the PMK in a face-to-face interview; therefore, some responses might have been affected by social desirability bias. Expectations, responsibilities and perceptions associated with the expression "basic needs" may also be related to social class. Beyond the aforementioned explanations, the difference between perception of financial situation and income observed in households living below the low-income cut-off undoubtedly reflects the heterogeneity of this population in terms of age, education, employment, and income, some living in extreme poverty, others less so.

In this regard, "financial situation" only indicates the material side of poverty. Combining this with other characteristics such as education, employment status of parents and household income presents the cultural as well as the material aspects of poverty, providing a more all-encompassing portrait of the socioeconomic status of families.

29. Based on small numbers, the percentage of PMKs perceiving themselves as living in extreme poverty should be interpreted with caution.

From the 1998 ÉLDEQ data, it was possible to combine these characteristics and make a socioeconomic status (SES) indicator of the infants' families (Wilms & Shields, 1996).[30] As expected, households with young mothers or single mothers were more likely to be in the lowest quintile of the SES, 43% for the former, and 68% for the latter. Only 4% of mothers under 25 years of age and virtually no single mothers were in the highest quintile (data not shown).[31]

This indicator will be useful for rounding out analyses based solely on the financial situation of the families. It will also help understand whether certain difficulties experienced by the children are due to extreme privation at the bottom of the social ladder, as some studies of language skills suggest (Lefebvre & Merrigan, 1998), or whether differences in classes are progressive, a function of social gradients. Longitudinal data collected by ÉLDEQ 1998-2002 will provide information on the families' financial and social mobility, and help gain a better understanding of the factors associated with these, such as family-structure or work-related transitions. The effects of *chronic* socioeconomic adversity on the development of children (Brooks-Gunn & Duncan, 1997) will be better discerned and understood as the data are analyzed in the coming years.

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30. More specifically, the socioeconomic status indicator combines measures describing occupational prestige, educational level and financial situation of the parents. It is calculated from 5 sources: educational level of the PMK, educational level of the spouse/partner, if applicable, prestige associated with the PMK's job and that of the spouse/partner, if applicable, and household income. For a more detailed description of this indicator, see Wilms & Shields (1996) or issue no. 12 in this series.

31. Among two-parent families, "non-traditional" ones had a lower socioeconomic status. Twice as many stepfamilies were in the lowest quintile of the SES compared to intact two-parent families (28% vs. 14%). This difference was also observed in common-law couples compared to married ones (20% vs. 11%, $p < 0.05$).

7. Child Care Arrangements

Important changes in child care services for young children have occurred in Québec in recent years. Since 1997, the *ministère de la Famille et de l'Enfance* has been setting up a network of approved child care services *Centres de la petite enfance - CPEs* (Child-Care Centres) whose mandate is to offer accessible, low-cost "educational" child care services to greater numbers of families. When this survey was being conducted on 5-month-old infants in 1998, low-cost child care ($5.00 a day), was not yet available for this age-group. By September 2000, however, all children of pre-school age will be eligible for this.

These recent transformations have in part been motivated by numerous North American studies and experiences which demonstrate the beneficial effects of stimulating programs for very young children, particularly aimed at those in poverty those aimed at children in poverty (*ministère de la Famille et de l'Enfance*, 1999).[32] Many studies comparing various types of child care arrangements show that high-quality ones increase cognitive, language and social skills, and have significant, long-lasting benefits for low-income families. For example, a study conducted as part of the NLSCY showed that children of low-income families who were in out-of-home organized daycare, government-licensed or not, presented cognitive aptitudes higher than those of children who were cared for at home by a family member or who had no child care (Kohen & Hertzman, 1998). Other studies reveal that particularly for children with difficult temperaments, availing themselves of out-of-home child care gives the parents respite, thereby improving the quality of their interactions with their children (McKim *et al.*, 1999).

The 1998 ÉLDEQ data provide information on the percentage of children who experienced some form of child care while their parents were at work or school, as well as details of these arrangements.

More than one in eight infants were in child care while the parents were at work or school, for a mean of 26.0 hours a week. Table 7.1 shows the distribution of infants by main type of child care, namely the one used for the most number of hours a week, for whom the type of care was known.[33] As indicated, the majority of infants who were taken care of were done so by unlicensed services: 4.1% of all infants were baby-sat by a member of the family other than the mother or father, either in the home or the relative's home, and 5% were in other types of unlicensed child care situations, in the majority of cases, outside the home (3.6% of all infants). Only 2% of all infants had a baby-sitter come to the home. Three and a half per cent were in government-licensed daycare facilities. The mean number of hours of child care varied between 25.2 for infants in licensed facilities to 27.6 for those in unlicensed ones outside the home (in someone else's home). The low numbers of infants in government-regulated daycare may be the result of parents choosing to use services that are more flexible and adapted to the specific needs of babies. The lack of spaces in nurseries located in the *Centres de la petite enfance* may also explain this situation in 1998.

32. As described in La Politique familiale. Un pas de plus vers l'épanouissement des familles (Family Policy - One More Step in the Blossoming of Families): "The services offer each child an educational program based on play, adapted to his age and time spent there;" they "constitute environments which facilitate detecting and preventing social problems" (ministère de la Famille et de l'Enfance, 1999, p. 16).

33. If infants are included for whom the main child care arrangements were not indicated, 14% of all infants had child care while their parents were at work or school, for a mean of 24.3 hours a week.

Table 7.1
Main Types of Child Care and Mean Number of Hours a Week by Type, 1998

	n[1]	%	Mean number of hours of child care
Member of the family (other than mother or father, in the home or relative's home)	90	4.1	25.6
Unlicensed child care	118	5.4	26.9
At home	39	1.8*	25.5
Outside the home	79	3.6	27.6
Licensed child care[2]	78	3.5	25.2
Total of infants in child care	**286**	**13**	**26**
No child care (other than mother or father)[3]	1,911	87.0	...
Total (all infants)	**2,197**	**100.0**	...

1. Excluding 26 infants for whom the main child care arrangements were unspecified.
2. Including daycare arranged through the *Centres de la petite enfance*, "in-house" daycare in the workplace, and licensed family home care.
3. While the parents were at work or school.

* Coefficient of variation (CV) between 15% and 25%; interpret with caution.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

For young children, stability is an important dimension of the quality of child care. Frequently changing the type of child care arrangements can disturb the very young, who need time to adapt to the new situation. Approximately 8% of those in child care (1.2% of all infants) had experienced a change in the main type of arrangement since birth. However, this figure is based on limited numbers, and should be interpreted with caution (data not shown).

As expected (see McKim *et al.*, 1999), low-income parents were relatively less likely to use child care while they were at work or school than those in higher income levels (11%[34] vs. 15%). Type of family (two-parent, single-parent), however, does not seem to be associated with use of child care services. The lack of association in this regard is no doubt due to the fact that, though single mothers, as seen earlier, were less likely to be employed, they were more likely to be attending an educational institution than their two-parent counterparts (see Sections 6.1 and 6.2). Consequently, the need for child care while the parent was at work or school was relatively the same in these two groups.

To complete the portrait of child care arrangements, the PMK was asked whether the infant was ever baby-sat by brothers or sisters. Nearly 2% of all infants were taken care of, for varying numbers of hours, by an older brother or sister.[35]

It should be emphasized that the fact an infant was not in child care while his parent(s) were working or at school, obviously does not mean that he was not participating in an educational activity or socialization process outside the family, or that the parent(s) had no benefit of respite. Among those who were not in child care while their parents were at work or school, approximately 2% had participated in educational activities such as a play group, "Mom and Tot" program, infant stimulation program, or had been left at a drop-in daycare centre. In all, 4.2% of infants were involved in these kinds of activities at the time of the survey (data not shown).

34. This estimate should be interpreted with caution, since the coefficient of variation (CV) was between 15% and 25%.

35. This percentage is equivalent to that of infants who had siblings 12 years of age or over (see Table 3.3).

8. Home and Neigbourhood

8.1 Housing

Residential mobility (frequent and/or recent moves) and living arrangements are important aspects in young families' standard of living. Although we do not precisely know the mechanisms underlying the effects of residential mobility, a recent study using NLSCY data indicates that frequent moving, a phenomenon most often observed in broken or disadvantaged families, is associated with behavioural problems in children (DeWit *et autres*, 1999). Owner/tenant status, type of dwelling, its condition and size, all play a role in the physical environment in which children live and develop. For example, an over-crowded dwelling can affect the quality of life of its inhabitants and exacerbate conflicts that may arise among them. A poor-quality dwelling can present safety problems, and compromise the healthy development of children.

More specifically, owner/tenant status is considered a key indicator of the housing conditions of a family. Owning one's home, even with the corresponding disadvantages such as a high down payment and constant administration and upkeep, is still a means by which families can exercise greater control over their living arrangements. Ownership means access to types of domiciles that are rarely, if ever rented (Steele, 1994). This includes single-family dwellings that have private play areas for children both indoors and outdoors. Further aspects such as sufficient room for family members, condition of the dwelling, and proportion of income devoted to it, usually mean that property owners, on the whole, live in better housing than tenants. It therefore follows that property owners' quality of life is often superior to that of tenants (Mongeau & Lapierre-Adamcyk, 1999), at least in urban areas. However, home ownership is not possible for everyone, mainly because of disparities in income.

Table 8.1 illustrates various characteristics of the infants' homes related to type of family.

A relatively large number of families, 40%, had been living at least a year in their current residence; however, only 22% had been living at the same address for 5 years or more. Nearly 60% of families were property owners, and an equivalent proportion were living in single-family dwellings, either detached (non-adjoining) (49%) or other (10%). Three in ten infants were living in "overcrowded" dwellings,[36] namely ones with less than one room per child. One in four dwellings (24%) were in need of repairs, 29% of which were described as "major"(data not shown).

36. The "overcrowded" indicator was calculated by the ratio of the number of children in the household to the number of bedrooms available for them. It therefore provides an index comprising the mean number of children per bedroom. If the index is higher than one, the dwelling is classified as "overcrowded" (Mongeau & Lapierre-Adamcyk, 1999).

Table 8.1
Description of Infants' Dwellings by Type of Family, 1998

	Type of Family		Total		χ^2
	Two-parent s	Single-parent			
	%		n	%	
Place of residence for:					p < 0,05
1 year or less	37,6	60,5	879	39,7	
2-4 years	39,4	24,9*	843	38,1	
5 years or more	23,0	14,6*	491	22,2	
Owner/tenant status					p < 0,05
Tenant	37,4	77,1	909	41,1	
Owner	62,6	22,9*	1 305	58,9	
Type of dwelling					p < 0,05
Detached, single-family home	52,2	16,1*	1 082	48,9	
Other types of single-family homes	9,2	12,6*	210	9,5	
Apartment (in a building)[1]	34,5	65,9	829	37,4	
Other[2]	4,1	5,4**	93	4,2	
Percentage of infants living in "overcrowded"[3] dwellings	29,7	35,8	675	30,4	not signif.
Percentage of infants living in dwellings in need of repairs	23,5	30,7	535	24,2	not signif.

1. Includes "duplexes (one unit above the other)," "low-rise apartment building (less than 5 storeys" and "high-rise apartment building (5 or more storeys)"
2 Includes mobile homes and "other."
3. See definition of "overcrowded" in Section 6.1
* Coefficient of variation (CV) between 15% and 25%; interpret with caution.
** Coefficient of variation (CV) higher than 25%; imprecise estimate for descriptive purposes only.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

As expected, owner/tenant status had a strong influence on the other characteristics of the domicile. Families who were owners were much more likely to live in single-family homes (74% vs. 12%; $p < 0.05$), presumed to be more adapted to the needs of children (yard, basement). In contrast, tenants were most likely to live in apartment buildings, in general, considered less adapted to the needs of families (75% vs. 11%; $p < 0.05$). Owners were less likely to be in dwellings with less than one room per child (21% vs. 44%; $p < 0.05$). However, contrary to expectations, no significant association was observed between owner/tenant status and physical condition of the dwelling (*i.e.*, need for repairs). This could be related in part to the types of homes young families can afford. Many of them do not have the financial wherewithal to buy a brand-new home.

Compared to two-parent families, single-parent ones were more likely to have been living in their current domicile for a year or less (61% vs. 38%), to be tenants (77% vs. 37%)[37] or to live in an apartment (66% vs. 35%), characteristics which are all strongly associated (Table 8.1). Stepfamilies or larger families (3 or more children) were more likely to be living in dwellings with less than one room per child (data not shown).

37. The question on owner/tenant status provided information on whether the dwelling belonged to a member of the household - i.e. whether the "household" was an owner or tenant. The question did not elicit which member of the household was the owner or tenant. In cases where a single mother was sharing the dwelling with her parent(s), we do not know whether the owner or tenant was her or the infant's grandparent(s).

Though the numbers were too small to permit a detailed analysis of the housing characteristics by type of family, we can surmise that some of the differences observed can be explained by the fact that single-parent families tend to be lower on the socioeconomic ladder and younger.

8.2 Neighbourhood

As they grow up, children become increasingly exposed to influences beyond the immediate family, such as other caregivers, people in the neighbourhood, etc. Each of these environments can have a rather specific influence, positive or negative, on the development of the child. For example, a safe neighbourhood where people help each other, or the sense of belonging to a group, can mitigate the impact of difficulties the child may be experiencing in his family. Both the physical and socioeconomic aspects of the environment in which the child lives may affect his development (green space, air quality, traffic density, criminal activity, lack of social support networks). For example, in a study conducted on data collected in the NLSCY, children living in neighbourhoods described as having little social cohesion appeared to have lower cognitive and social skills than their counterparts in more cohesive communities (Kohen *et autres*, 1998).

In ÉLDEQ 1998, the PMK was asked to comment on certain aspects of the neighbourhood. The questionnaire was the same as that used in Cycle 2 of the NLSCY. In addition to the question on how long the family had been living at the current address, 16 questions focused on neigbourhood safety. A factor analysis of responses to these 16 questions in resulted in two sub-scales comprising 1) the perception that the neigbourhood was safe and people helped one another, and 2) the perception that the neighbourhood had many social problems. The factor on neighbourhood safety and social cohesion had statements such as "It is safe to walk alone in this neighbourhood after dark" and "People around are willing to help their neighbours." The factor on social problems involved questions formulated to measure the magnitude of problems such as drug trafficking and consumption, break-ins, inter-ethnic and/or religious tensions, etc.[38]

Whatever the variable examined, the perception of the neighbourhood was significantly correlated with socioeconomic level, those in a higher bracket tending to perceive their area as having few social problems and as being quite safe and helpful (Table 8.2).

Figure 8.1 shows the relationship between socioeconomic status and perception of the neighbourhood as a place to bring up children.[39] As indicated, 90% of the PMKs in the highest quintile of socioeconomic status deemed their neighbourhood to be an excellent or good place to raise children, versus 68% of those in the lowest quintile. A significant association was also observed between socioeconomic status and the presence of safe parks, playgrounds and places to play in the neighbourhood (data not shown).

Table 8.2
Correlation between Sub-Scales on Neigbourhood Safety (Perception of the PMK[1]) and Socioeconomic Status, 1998

	Socioeconomic status[2]	
	r[3]	p
Few social problems in neighbourhood[4]	0.2	$p < 0.05$
Unsafe neigbourhood/people don't help each other[5]	-0.23	$p < 0.05$

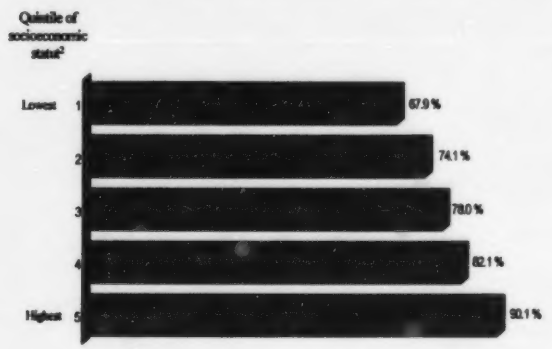
1. Person Most Knowledgeable of the infant.
2. Continuous variable for which values varied between -2.8 (lowest SES) and 3.7 (highest SES).
3. The correlation coefficient can vary between -1 and 1 according to whether the association is negative or positive. The further the coefficient is from 0, the stronger the association among the variables.
4. Sub-scale derived from 7 questions on neighbourhood safety (see Section 6.2). The score varied between 1 and 3. A high score indicated the PMK perceived few social problems.
5. Sub-scale derived from 6 questions on neighbourhood safety (see Section 6.2). The score varied between 1 and 4. A high score indicated the PMK perceived a low level of safety/social cohesion.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

38. The Cronbach alphas for the two sub-scales retained were 0.86 and 0.75 respectively. For more details, see number 12 in this series of papers.

39. This was not included in the two aforementioned sub-scales.

Figure 8.1
Proportion of PMKs[1] who Perceived their Neighbourhood as an Excellent or Good Place to Raise Children, by Socioeconomic Status, 1998



$p < 0.05$

1. Person Most Knowledgeable of the infant.
2. Families are classified in ascending order of socioeconomic status, the first quintile representing the 20% of families with the lowest status.

Source: *Institut de la statistique du Québec, ÉLDEQ 1998-2002.*

Various avenues of research can be pursued in the coming years to expand on the data derived from the PMKs' perceptions of neighbourhood safety. For example they can be combined with unemployment rates or single-parent rates to provide more detail on the physical and social environment in which the child is growing up. Combining this information will help identify the specific influence of individual, family and social characteristics of the child's world on his/her development (Boyle & Lipman, 1998).

9. Conclusion

The data presented in this report have painted a broad portrait of the main social and physical environments of 5-month-old Québec infants in 1998. The infant's type of family, socioeconomic characteristics of the parents, child care arrangements, housing conditions and nature of the neighbourhood were examined in turn. The data gathered in subsequent years of ÉLDEQ 1998-2002 will cast light on how these environments have influenced the developmental paths of the pre-school target population. Though it is clear that environment plays a key role in child development, we are just beginning to understand the specific ways in which individual or combinations of environmental factors influence the health and social adjustment of children. Because of its annual, prospective nature, and the diversity of data that are being gathered (see other papers in this series), ÉLDEQ 1998-2002 should provide approaches to answering such questions as - when and how, in early childhood, do learning or behavioural problems first manifest themselves in Québec children?

Beginning to monitor children at a very young age should help identify the impact of early adverse conditions such as low socioeconomic status compared to later influences. Situations can also be characterized as either transient or chronic. Furthermore, data gathered over the years will help us learn how preventive factors proper to the family (parenting practices), social environment (child care, neighbourhood cohesion), and/or child (temperament, sociability) contribute to the optimum development of young people who have been exposed to adversity from birth.

In short, we have begun to see the wealth of data and promising directions for research that this first year of ÉLDEQ 1998-2002 has provided. In the medium term, pooling knowledge derived from this survey will help advance our understanding of the precursors of pyschosocial adjustment in early childhood. The main challenge will be to apply this knowledge to designing and implementing early preventive programs and interventions that foster the well-being and harmonious development of children entering the school system at the beginning of this millennium.

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Glossary

Centre de la petite enfance	Child-care centre
Commission d'accès à l'information du Québec - CAI	Québec Access to Information Commission
Conseil québécois de la recherche sociale (CQRS)	Social Research Council of Québec
Direction de la méthodologie et des enquêtes spéciales, ISQ	Methodology and Special Surveys Division, ISQ
Direction de la santé publique de la Régie régionale de la santé et des services sociaux de Montréal-Centre	Public Health Department, Montréal-Centre Regional Health Board
Direction de la technologie et des opérations statistiques, ISQ	Technology and Statistical Operations Division, ISQ
Direction des normes et de l'information, ISQ	Standards and Information Division, ISQ
Direction Santé Québec, ISQ	Health Québec Division
Étude des jumeaux nouveaux-nés au Québec - ÉJNQ	Québec Study of Newborn Twins
Fichier maître des naissances	Master Birth Register
Fonds de la recherche en santé du Québec (FRSQ)	Health Research Fund of Québec
Fonds pour la formation de chercheurs et l'aide à la recherche (FCAR)	Researcher Education and Research Assistance Fund
Groupe de recherche sur l'inadaptation psychosociale chez l'enfant - GRIP	Research Unit on Children's Pyschosocial Maladjustment
Institut de la statistique du Québec, ISQ	Québec Institute of Statistics
La Politique Familiale	Policy on Families
Le Rapport Bouchard (1991) « Un Québec fou de ses enfants »	The Bouchard Report, 1991: A Québec in Love with its Children
Les Priorités nationales de santé publique	Priorities for Public Health
ministère de l'Éducation	Ministry of Education
ministère de la Famille et de l'Enfance	Ministry of Family and Child Welfare
ministère de la Justice	Ministry of Justice
ministère de la Recherche, Science et Technologie	Ministry of Research, Science and Technology
ministère de la Santé et des Services sociaux du Québec (MSSS)	Ministry of Health and Social Services of Québec
ministère de la Sécurité publique	Ministry of Public Security
ministère de la Solidarité sociale	Ministry of Social Solidarity - formerly Income Security (Welfare)
Politique de la santé et du bien-être	Policy on Health and Well-Being
Service de la recherche	Research services
Service de support aux opérations de la Régie de l'assurance-maladie du Québec - RAMQ	Operations Support Section of the Québec Health Insurance Board

List of Papers in Volume 1 of this Series

This paper is one of a series comprising Volume 1 of: JETTÉ, M., H. DESROSIERS, R. E. TREMBLAY and J. THIBAULT (2000). Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1.

The following is a list of all the analytical papers in Volume 1 available or planned as of this date:

JETTÉ, M., and L. DES GROSEILLIERS (2000). "Survey Description and Methodology" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 1.

DESROSIERS, H. (2000). "Family, Child Care and Neighbourhood Characteristics" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 2.

SÉGUIN, L., L. POTVIN, K. FROHLICH and C. DUMAS (2000). "Standard of Living, Health and Development, Part I - Child Poverty, Health and Development" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 3. (To be published in 2001)

PAQUET, G., and L. DUBOIS (2000). "Standard of Living, Health and Development, Part II - Social Inequality and Child Development" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 3. (To be published in 2001)

PETIT, D., C. SIMARD, J. PAQUET and J. MONTPLAISIR (2000). "Sleep" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 4.

DUBOIS, L., B. BÉDARD, M. GIRARD and É. BEAUCHESNE (2000). "Diet" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 5.

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C. JAPEL, R. E. TREMBLAY, P. McDUFF and A. GIRARD (2000). "Motor, Social and Cognitive Development, Part I - Motor and Social Development" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 8.

BAILLARGEON, R., C. JAPEL, P. McDUFF and A. GIRARD (2000). "Motor, Social and Cognitive Development, Part II - Cognitive Development" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 8.

JAPEL, C., R. E. TREMBLAY and P. McDUFF (2000). "Parents' Health and Social Adjustment, Part I - Lifestyle Habits and Health Status" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 9.

ZOCCOLILLO, M. (2000). "Parents' Health and Social Adjustment, Part II - Social Adjustment" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 9.

BOIVIN, M., D. PÉRUSSE, V. SAYSSET, N. TREMBLAY and R. E. TREMBLAY (2000). "Parenting and Family Relations, Part I - Parenting Perceptions and Behaviours" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 10.

JAPEL, C., R. E. TREMBLAY and P. McDUFF (2000). "Parenting and Family Relations, Part II - Family Environment" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 10.

MARCIL-GRATTON, N., and H. JUBY (2000). "Conjugal Life of the Parents, Part I - The Parents' Conjugal History: A Determinant of the Child's Family Path?" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 11.

DESROSIERS, H., M. BOIVIN and V. SAYSSET (2000). "Conjugal Life of the Parents, Part II - Spousal/Partner Support - What Do the Mothers Think?" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 11.

THIBAULT, J., M. JETTÉ, H. DESROSIERS and R.E. TREMBLAY (2000). "Concepts, Definitions and Operational Aspects, Part I - Design of Phase I of ÉLDEQ, Instruments and Procedures" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 12. (To be published in December).

DESROSIERS, H., M. BOIVIN and L. DES GROSEILLIERS (2000). "Concepts, Definitions and Operational Aspects, Part II - Data, Variables and Scales" in Longitudinal Study of Child Development in Québec (ÉLDEQ 1998-2002), Québec, Institut de la statistique du Québec, Vol. 1, No. 12. (To be published in December).

Note: Other analytical papers may be published as part of Volume 1 in this series, either in December 2000 or in 2001.

This paper presents a portrait of family, child care and neigbourhood characteristics of a representative sample of 5-month-old infants in Québec in 1998. Type of family, demographic and socioeconomic characteristics of the parents, child care arrangements, housing conditions, and neighbourhood cohesion are analyzed. Certain characteristics of absent biological fathers are also examined. The cross-sectional portrait is based on a sample of 2,223 children, approximately 5 months of age, whose parent(s) accepted to participate in ÉLDEQ 1998-2002, a five-year longitudinal study. This paper has two goals - familiarize the reader with characteristics of the target population in Year 1 of the study, and facilitate understanding of the results which are presented in subsequent papers. To illustrate the wealth of data the survey is providing, promising directions for further research are suggested.

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